ATLAS NORTHERN ANTHRACITE FIELD. PART 3. MINE SHEET NO. XIII. 1

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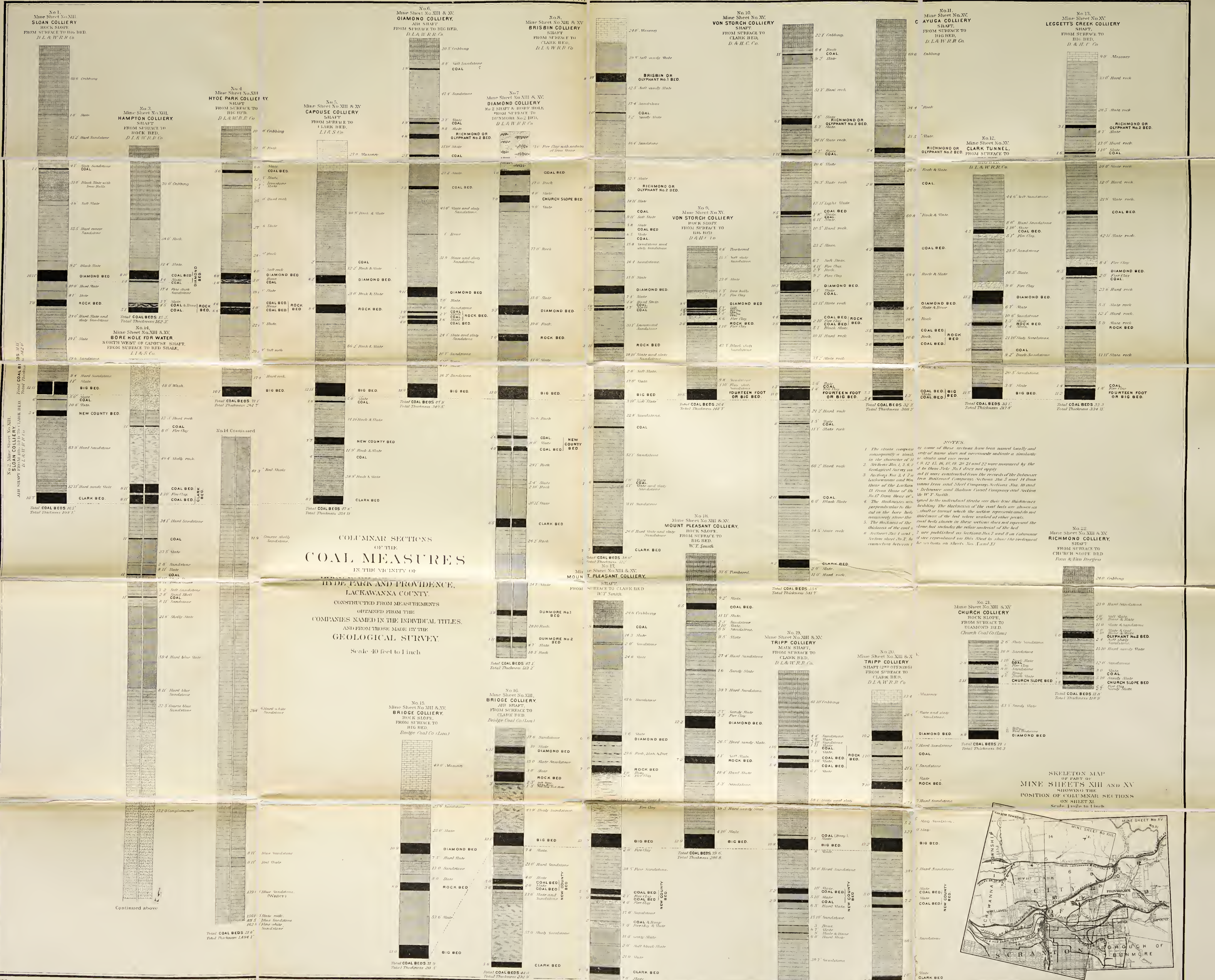
GEOLOGICAL SURVEY OF PENNSYLVANIA. J. P. LESLEY, STATE GEOLOGIST.

ANTHRACITE DISTRICT. FRANK A. HILL, GEOLOGIST IN CHARGE.


No. 1. Mine Sheet No. XIII. SLOAN COLLIERY ROCK SLOPE FROM SURFACE TO BIG BED. D. L. & W. R. R. Co.
No. 2. Mine Sheet No. XIII. SLOAN COLLIERY AIR SHAFT FROM BIG BED TO CLARK BED. D. L. & W. R. R. Co.
No. 3. Mine Sheet No. XIII. HAMPTON COLLIERY. SHAFT FROM SURFACE TO ROCK BED. D. L. & W. R. R. Co.
No. 4. Mine Sheet No. XIII. HYDE PARK COLLIERY. SHAFT FROM SURFACE TO BIG BED. D. L. & W. R. R. Co.
No. 5. Mine Sheet No. XIII & XV. CAPOUSE COLLIERY SHAFT FROM SURFACE TO CLARK BED. L. I. & S. Co.
No. 6. Mine Sheet No. XIII & XV. DIAMOND COLLIERY, AIR SHAFT FROM SURFACE TO BIG BED. D. L. & W. R. R. Co.
No. 7. Mine Sheet No. XIII & XV. DIAMOND COLLIERY No. 2 SHAFT & BORE HOLE FROM SURFACE TO DUNMORE No. 2 BED. D. L. & W. R. R. Co.
No. 8. Mine Sheet No. XIII & XV. BRISBIN COLLIERY SHAFT FROM SURFACE TO CLARK BED. D. L. & W. R. R. Co.
No. 9. Mine Sheet No. XV. VON STORCH COLLIERY ROCK SLOPE FROM SURFACE TO BIG BED. D. & H. C. Co.
No. 10. Mine Sheet No. XV. VON STORCH COLLIERY SHAFT. FROM SURFACE TO CLARK BED. D. & H. C. Co.
No. 11. Mine Sheet No. XV. CAYUGA COLLIERY SHAFT. FROM SURFACE TO BIG BED. D. L. & W. R. R. Co.
No. 12. Mine Sheet No. XV. CLARK TUNNEL. FROM SURFACE TO BIG BED. D. L. & W. R. R. Co.
No. 13. Mine Sheet No. XV. LEGGETT'S CREEK COLLIERY SHAFT. FROM SURFACE TO BIG BED. D. & H. C. Co.
No. 14. Mine Sheet No. XIII & XV. BORE HOLE FOR WATER NORTH WEST OF CAPOUSE SHAFT. FROM SURFACE TO RED SHALE. L. I. & S. Co.
No. 14 Continued
No. 15. Mine Sheet No. XIII & XV. BRIDGE COLLIERY. ROCK SLOPE. FROM SURFACE TO BIG BED. Bridge Coal Co. (Lim.)
No. 16. Mine Sheet No. XIII. BRIDGE COLLIERY. AIR SHAFT. FROM SURFACE TO CLARK BED. Bridge Coal Co. (Lim.)
No. 17. Mine Sheet No. XIII & XV. MOUNT PLEASANT COLLIERY. SHAFT FROM SURFACE TO CLARK BED. W. T. Smith.
No. 18. Mine Sheet No. XIII & XV. MOUNT PLEASANT COLLIERY. ROCK SLOPE. FROM SURFACE TO BIG BED. W. T. Smith.
No. 19. Mine Sheet No. XIII & XV. TRIPP COLLIERY MAIN SHAFT. FROM SURFACE TO CLARK BED. D. L. & W. R. R. Co.
No. 20. Mine Sheet No. XIII & XV. TRIPP COLLIERY SHAFT (2nd OPENING) FROM SURFACE TO CLARK BED. D. L. & W. R. R. Co.
No. 21. Mine Sheet No. XIII & XV. CHURCH COLLIERY ROCK SLOPE. FROM SURFACE TO DIAMOND BED. Church Coal Co. (Lim.)
No. 22. Mine Sheet No. XIII & XV. RICHMOND COLLIERY. SHAFT FROM SURFACE TO CHURCH SLOPE BED. Finn & Van Bergen
BRISBIN OR OLYPHANT No. 1 BED.
RICHMOND OR OLYPHANT No. 2 BED.
CHURCH SLOPE BED
DIAMOND BED
ROCK BED
BIG BED.
FOURTEEN FOOT OR BIG BED.
NEW COUNTY BED
CLARK BED
DUNMORE No. 1 BED
DUNMORE No. 2 BED
Continued above
RANSOM TOWNSHIP
MINE SHEET No XIII.
MINE SHEET No XV
No. XI
DELAWARE LACKAWANNA & WESTERN R. R.
PROVIDENCE
SCRANTON
BOROUGH OF DUNMORE

COLUMNAR SECTIONS OF THE COAL MEASURES IN THE VICINITY OF HYDE PARK AND PROVIDENCE, LACKAWANNA COUNTY.

CONSTRUCTED FROM MEASUREMENTS OBTAINED FROM THE COMPANIES NAMED IN THE INDIVIDUAL TITLES. AND FROM THOSE MADE BY THE GEOLOGICAL SURVEY.

Scale 40 feet to 1 inch

NOTES.

1. The strata composin[illegible] of some of these sections have been named locally and consequently a simil[illegible]ity of name does not necessarily indicate a similarity in the character of th[illegible] strata and vice versa.
2. Sections Nos. 1, 2, 6, [illegible] 9, 12, 15, 16, 18, 19, 20, 21 and 22 were measured by the Geological Survey an[illegible] to them Note No. 1 does not apply.
3. Sections Nos. 3, 4, 7 a[illegible] and 11 were constructed from the records of the Delaware Lackawanna and Wes[illegible]tern Railroad Company; Sections Nos. 5 and 14 from those of the Lackaw[illegible]anna Iron and Steel Company; Sections Nos. 10 and 13 from those of th[illegible] Delaware and Hudson Canal Company and Section No. 17 from those of [illegible] Mr. W. T. Smith.
4. The thicknesses ass[illegible]igned to the individual strata are their true thicknesses perpendicular to the [illegible] bedding. The thicknesses of the coal beds are shown as cut in the bore hole[illegible], shaft or tunnel which the section represents and do not necessarily show the [illegible] thickness of the bed where worked at other points.
5. The thickness of the [illegible] coal beds shown in these sections does not represent the thickness of the coal [illegible]alone, but includes the refuse material of the bed.
6. Sections Nos. 1 and [illegible] 2 are published as Sections Nos. 7 and 8 on Columnar Section sheet No. X. [illegible]and are reproduced on this Sheet to show the Geological connection between t[illegible]he sections on sheets Nos. X and XI.

SKELETON MAP OF PART OF MINE SHEETS XIII AND XV SHOWING THE POSITION OF COLUMNAR SECTIONS ON SHEET XI.

Scale 1 mile to 1 inch

WILLIAM GRIFFITH, ASSISTANT GEOLOGIST. ROBERT A. QUIN, GEORGE W. MILNES, WILBUR F. SMITH, ASSISTANTS

Scale of Coal Measure Sections 40 feet to 1 inch

FEET 40 30 20 10 0 40 80 120 160 200

METERS 10 5 0 10 20 30 40 50 60

$\frac{1}{480}$ of Nature

AUGUST 1888

REFERENCE SURVEY MAPS AND SECTIONS NORTHERN COAL FIELD MINE SHEETS Nos. XIII AND XV. CROSS SECTION SHEETS.

ATLAS NORTHERN ANTHRACITE FIELD. PART 3. MINE SHEET NO. XVI.

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GEOLOGICAL SURVEY OF PENNSYLVANIA. J. P. LESLEY, STATE GEOLOGIST.

ANTHRACITE DISTRICT, FRANK A. HILL, GEOLOGIST IN CHARGE.

COLUMNAR SECTIONS
OF THE
COAL MEASURES
IN THE VICINITY OF
SCRANTON, DUNMORE AND THROOP,
LACKAWANNA COUNTY.

CONSTRUCTED FROM MEASUREMENTS
OBTAINED FROM THE
COMPANIES NAMED IN THE INDIVIDUAL TITLES.
AND FROM THOSE MADE BY THE
GEOLOGICAL SURVEY.

Scale 40 feet to 1 inch.

NOTES.

1. The strata composing some of these sections have been named locally and consequently a similarity of name does not necessarily indicate a similarity in the character of the strata and vice versa.

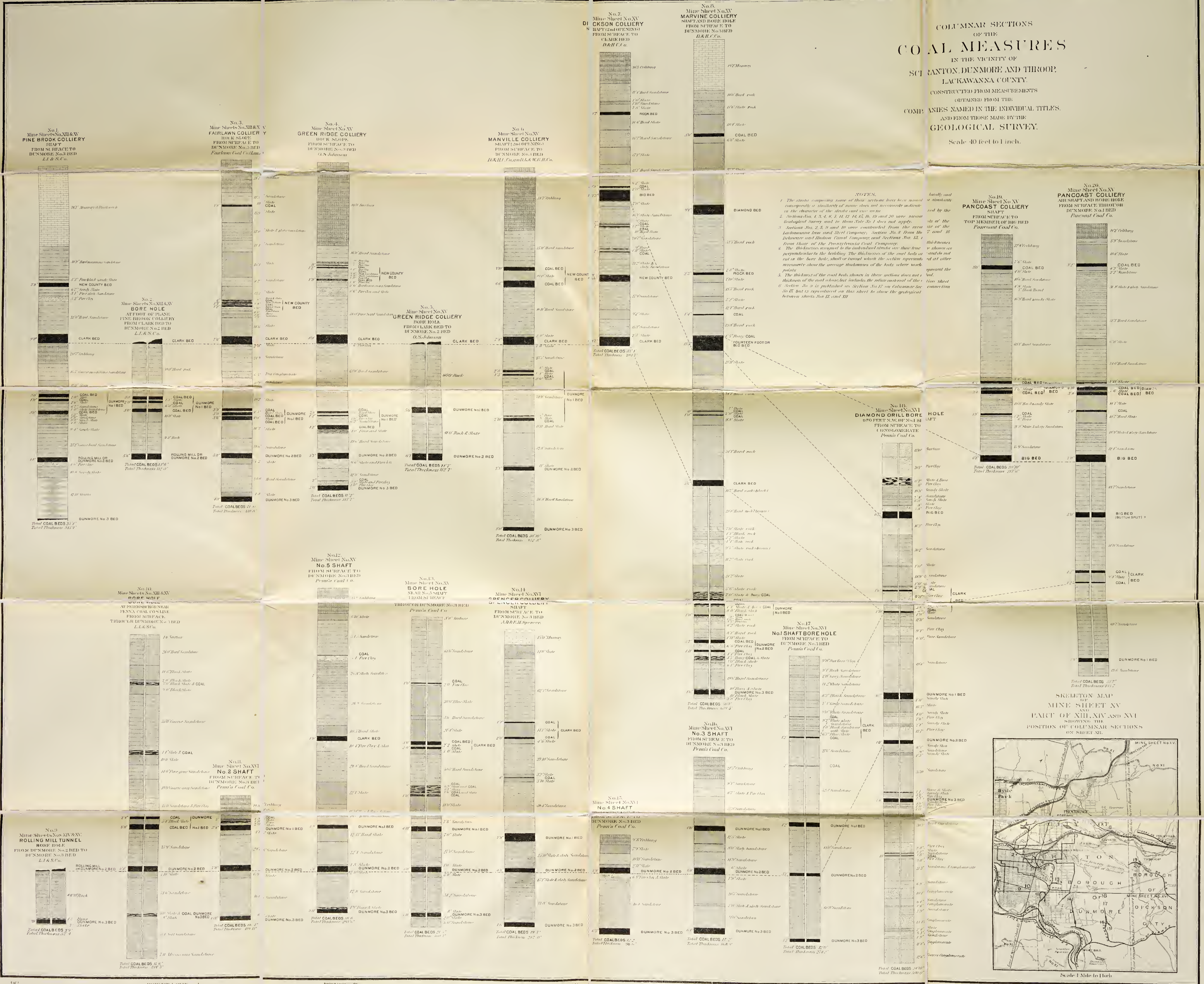
2. Sections Nos. 1, 3, 4, 6, 7, 11, 12, 14, 15, 16, 19 and 20 were measu red by the Geological Survey and to them Note No 1 does not apply.

3. Sections Nos. 2, 5, 9 and 10 were constructed from the recor ds of the Lackawanna Iron and Steel Company; Section No. 8 from tho se of the Delaware and Hudson Canal Company, and Sections Nos. 13, 1 7 and 18 from those of the Pennsylvania Coal Company.

4. The thicknesses assigned to the individual strata are their true thicknesses perpendicular to the bedding. The thicknesses of the coal beds a re shown as cut in the bore hole, shaft or tunnel which the section represents and do not necessarily show the average thicknesses of the beds where work ed at other points.

5. The thickness of the coal beds shown in these sections does not r epresent the thickness of the coal alone, but includes the refuse material of the bed.

6. Section No 9 is published as Section No. 17 on Columnar Sec tion sheet No IX but is reprinted on this sheet to show the geological connection between sheets Nos IX and XII.


No. 1. Mine Sheets No. XIII & XV PINE BROOK COLLIERY SHAFT FROM SURFACE TO DUNMORE No. 3 BED L.I. & S. Co.
No. 2. Mine Sheets No. XIII & XV BORE HOLE AT FOOT OF PLANE PINE BROOK COLLIERY FROM CLARK BED TO DUNMORE No. 2 BED L.I. & S. Co.
No. 3. Mine Sheets No. XIII & XV FAIRLAWN COLLIERY ROCK SLOPE FROM SURFACE TO DUNMORE No. 3 BED Fairlawn Coal Co. (Lim.)
No. 4. Mine Sheet No. XV GREEN RIDGE COLLIERY ROCK SLOPE FROM SURFACE TO DUNMORE No. 3 BED O. S. Johnson
No. 5. Mine Sheet No. XV GREEN RIDGE COLLIERY BORE HOLE FROM CLARK BED TO DUNMORE No. 2 BED O. S. Johnson
No. 6. Mine Sheet No. XV MANVILLE COLLIERY SHAFT (2nd OPENING) FROM SURFACE TO DUNMORE No. 3 BED D. & H. C. Co. and D. L. & W. R. R. Co.
No. 7. Mine Sheet No. XV DICKSON COLLIERY SHAFT (2nd OPENING) FROM SURFACE TO CLARK BED D. & H. C. Co.
No. 8. Mine Sheet No. XV MARVINE COLLIERY SHAFT AND BORE HOLE FROM SURFACE TO DUNMORE No. 3 BED D. & H. C. Co.
No. 9. Mine Sheets Nos. XIV & XV ROLLING MILL TUNNEL BORE HOLE FROM DUNMORE No. 2 BED TO DUNMORE No. 3 BED L.I. & S. Co.
No. 10. Mine Sheets No. XIII & XV BORE HOLE AT PETERSBURG NEAR PENNA COAL CO. LINE FROM SURFACE THROUGH DUNMORE No. 3 BED L.I. & S. Co.
No. 11. Mine Sheet No. XVI No. 2 SHAFT FROM SURFACE TO DUNMORE No. 3 BED Penn'a Coal Co.
No. 12. Mine Sheet No. XV No. 5 SHAFT FROM SURFACE TO DUNMORE No. 3 BED Penn'a Coal Co.
No. 13. Mine Sheet No. XV BORE HOLE NEAR No. 5 SHAFT FROM SURFACE THROUGH DUNMORE No. 3 BED Penn'a Coal Co.
No. 14. Mine Sheet No. XVI SPENCER COLLIERY SHAFT FROM SURFACE TO DUNMORE No. 3 BED A. H. & F. M. Spencer.
No. 15. Mine Sheet No. XVI No. 4 SHAFT DUNMORE No. 3 BED Penn'a Coal Co.
No. 16. Mine Sheet No. XVI No. 3 SHAFT FROM SURFACE TO DUNMORE No. 3 BED Penn'a Coal Co.
No. 17. Mine Sheet No. XVI No. 1 SHAFT BORE HOLE FROM SURFACE TO DUNMORE No. 3 BED Penn'a Coal Co.
No. 18. Mine Sheet No. XVI DIAMOND DRILL BORE HOLE 970 FEET N.W. OF No. 1 SHAFT FROM SURFACE TO CONGLOMERATE Penn'a Coal Co.
No. 19. Mine Sheet No. XV PANCOAST COLLIERY SHAFT FROM SURFACE TO TOP MEMBER OF BIG BED Pancoast Coal Co.
No. 20. Mine Sheet No. XV PANCOAST COLLIERY AIR SHAFT AND BORE HOLE FROM SURFACE THROUGH DUNMORE No. 1 BED Pancoast Coal Co.
CLARK BED
NEW COUNTY BED
ROCK BED
DIAMOND BED
FOURTEEN FOOT OR BIG BED
BIG BED
DUNMORE No. 1 BED
DUNMORE No. 2 BED
DUNMORE No. 3 BED
ROLLING MILL OR DUNMORE No. 2 BED
SKELETON MAP OF MINE SHEET XV AND PART OF XIII, XIV AND XVI SHOWING THE POSITION OF COLUMNAR SECTIONS ON SHEET XII.
MINE SHEET No. XV
MINE SHEET No. XVI
SCRANTON
BOROUGH OF DUNMORE
BOROUGH OF THROOP
DICKSON CITY
Hyde Park
PROVIDENCE
Scale 1 Mile to 1 Inch

18?.

WILLIAM GRIFFITH ASSISTANT GEOLOGIST

ROBERT A. QUIN,
GEORGE W. MILNES, | ASSISTANTS
WILBUR F. SMITH.

Scale of Coal Measure Sections 40 Feet to 1 Inch

FEET

METERS

AUGUST 1888

REFERENCE SURVEY MAPS AND SECTIONS
NORTHERN COAL FIELD { MINE SHEETS Nos. XI, XIII AND XIV. CROSS SECTION SHEETS.

ATLAS NORTHERN ANTHRACITE FIELD. PART 3. COLUMNAR SECTION SHEET No. 6.

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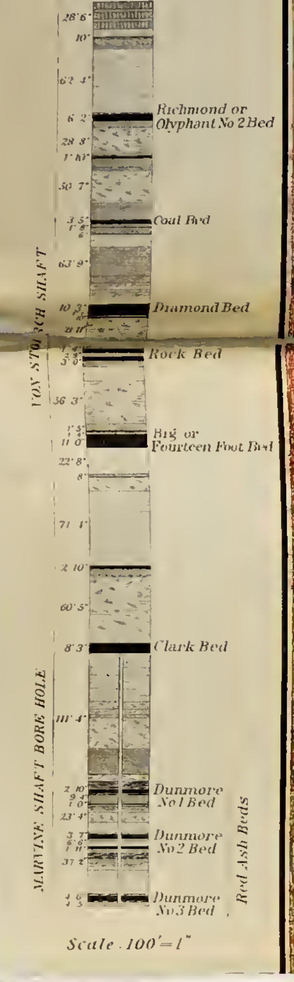
GEOLOGICAL SURVEY OF PENNSYLVANIA. J. P. LESLEY, STATE GEOLOGIST
ANTHRACITE DISTRICT, FRANK A HILL, GEOLOGIST IN CHARGE

WYOMING BASIN, SCRANTON DISTRICT, LACKAWANNA COUNTY.

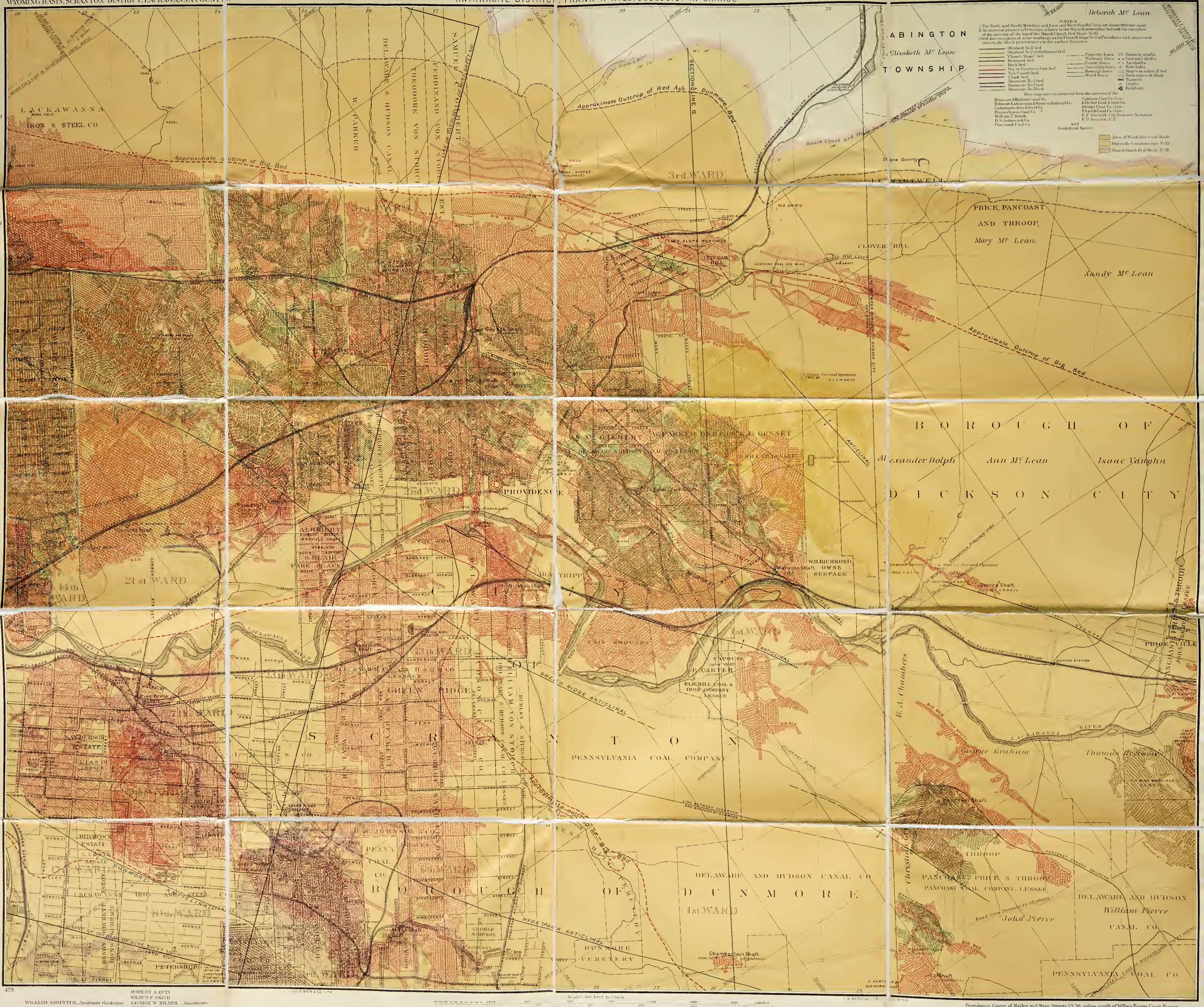
NORTHERN COAL FIELD MINE SHEET, No. XV

SECTION OF COAL MEASURES
PROVIDENCE SHEET
VON STORCH SHAFT
AND
MARVINE SHAFT BORE HOLE
DELAWARE & HUDSON CANAL CO.



28' 6"
10"
62' 4"
6' 2"
Richmond or Olyphant No 2 Bed
28' 8"
1' 10"
50' 7"
3' 5"
Coal Bed
63' 9"
10' 3"
Diamond Bed
8' 11"
3' 0"
Rock Bed
56' 3"
11' 0"
Big or Fourteen Foot Bed
22' 8"
8"
71' 1"
2' 10"
60' 5"
8' 3"
Clark Bed
111' 4"
2' 10"
23' 4"
Dunmore No 1 Bed
3' 7"
Dunmore No 2 Bed
37' 2"
Dunmore No 3 Bed
VON STORCH SHAFT
MARVINE SHAFT BORE HOLE
Red Ash Beds

Scale 100' = 1"



Deborah Mc Lean
ABINGTON TOWNSHIP
Elizabeth Mc Lean
LACKAWANNA IRON & STEEL CO.
W. PARKER
DELAWARE & HUDSON CANAL
THEODORE VON STORCH
FERDINAND VON STORCH
SAMUEL
Approximate Outcrop of Red Ash or Dunmore Bed
Approximate outcrop of Big Bed
SECTION LINE G
3rd WARD
Manch Chunk Red Shale
Stone Quarry
PRICE, PANCOAST AND THROOP
Mary Mc Lean
CLOVER HILL
Sandy Mc Lean
BOROUGH OF DICKSON CITY
Alexander Dolph
Ann Mc Lean
Isaac Vaughn
PROVIDENCE
2nd WARD
21st WARD
14th WARD
ANTICLINAL
Marvine Shaft
Storrs Shaft
Dickson Shaft
W. H. RICHMOND OWNS SURFACE
LACKAWANNA RIVER
1st WARD
GREEN RIDGE
GREEN RIDGE ANTICLINAL
13th WARD
SANDERSON ESTATE
SCRANTON
PENNSYLVANIA COAL COMPANY
P. CARTER
ELK HILL COAL & IRON COMPANY LESSEE
George Graham
Thomas Robson
Pancoast Shaft
THROOP
PANCOAST, PRICE & THROOP
PANCOAST COAL COMPANY, LESSEE
DELAWARE AND HUDSON CANAL CO.
William Pierce
John Pierce
HITCHCOCK ESTATE
DUNMORE ANTICLINAL
LACKAWANNA IRON AND STEEL CO.
10th WARD
PETERSBURG
LINE OF OVERLAP OF MINE SHEET XIII AND XIV
HYDE PARK ANTICLINAL
PENN'A COAL CO.
BOROUGH OF DUNMORE
GEORGE SIMPSON
DUNMORE CEMETERY
FOREST HILL CEMETERY
Chamberlain Shaft (Abandoned)
P. CARTER'S OLD WORKINGS
PENNSYLVANIA COAL CO.
BIG BED
PRICEVILLE
DICKSON STATION

NOTES.

1. The North and South Meridian and East and West Parallel lines are drawn 2000 feet apart
2. All material printed in Vermilion relates to the Big or Fourteen Foot bed with the exception of the outcrop of the top of the Mauch Chunk Red Shale No. XI
3. With the exception of mine workings in the "Church Slope" bed at Providence rock slopes and tunnels, the black print relates to the surface features

- Olyphant No 1 bed
- Olyphant No 2 or Richmond bed
- "Church Slope" bed
- Diamond bed
- Rock bed
- Big or Fourteen Foot bed
- New County bed
- Clark bed
- Dunmore No 1 bed
- Dunmore No 2 bed
- Dunmore No 3 bed

- Property lines
- Warrant lines
- County lines
- Township lines
- Borough lines
- Ward lines

- Hoisting shafts
- Coal trial shafts
- Air shafts
- Bore holes
- Slopes in color of bed
- Rock slopes in black
- Tunnels
- Drifts
- Buildings

This map was constructed from the surveys of the

Delaware & Hudson Canal Co.
Delaware Lackawanna & Western Railroad Co.
Lackawanna Iron & Steel Co.
Pennsylvania Coal Co.
William T. Smith
O. S. Johnson & Co.
Pancoast Coal Co.
Fairlawn Coal Co. (Lim.)
Elk Hill Coal & Iron Co.
Bridge Coal Co. (Lim.)
Church Coal Co. (Lim.)
E. F. Blewitt, City Engineer Scranton
F. P. Amsden, C. E.
and
Geological Survey

- Area of Workable Coal Beds
- Pottsville Conglomerate No. XII
- Mauch Chunk Red Shale No. XI

479.

LIUS BIEN & CO LITH

E K MEYERS ... PRINTER

WILLIAM GRIFFITH, Assistant Geologist

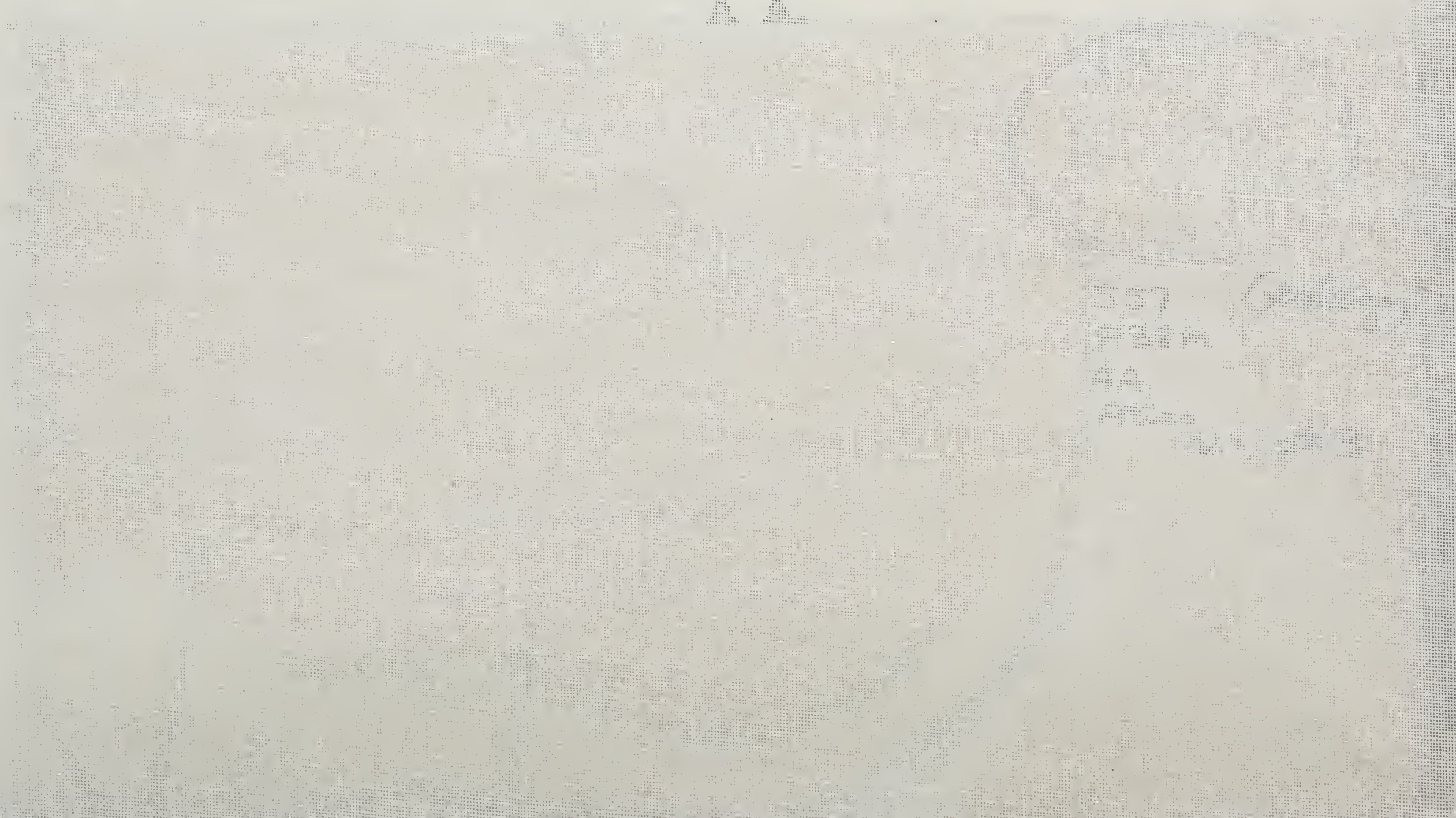
ROBERT A. QUIN
WILBUR F. SMITH
GEORGE W. MILNES   Assistants
HOWELL T. FISHER
JINZOO ADACHI

Scale 800 Feet to 1 Inch
1/9600 of Nature

JUNE 1888.

Providence, Center of Market and Main Streets 13.36 miles north of Wilkes Barre Court House
" " " " " " 11.40 " east "
Latitude of Monument, Wilkes Barre Court House yard (observed) 41° 14' 40.48"
Longitude . . . . east of Washington 1° 10' 3.6"
Latitude of Scranton Court House (U.S. Coast and Geodetic Survey) 41° 24' 29"
Longitude " " East of Washington 1° 23' 13.6"

ATLAS NORTHERN ANTHRACITE FIELD. PART II. MINE SHEET NO. XIV. 2.

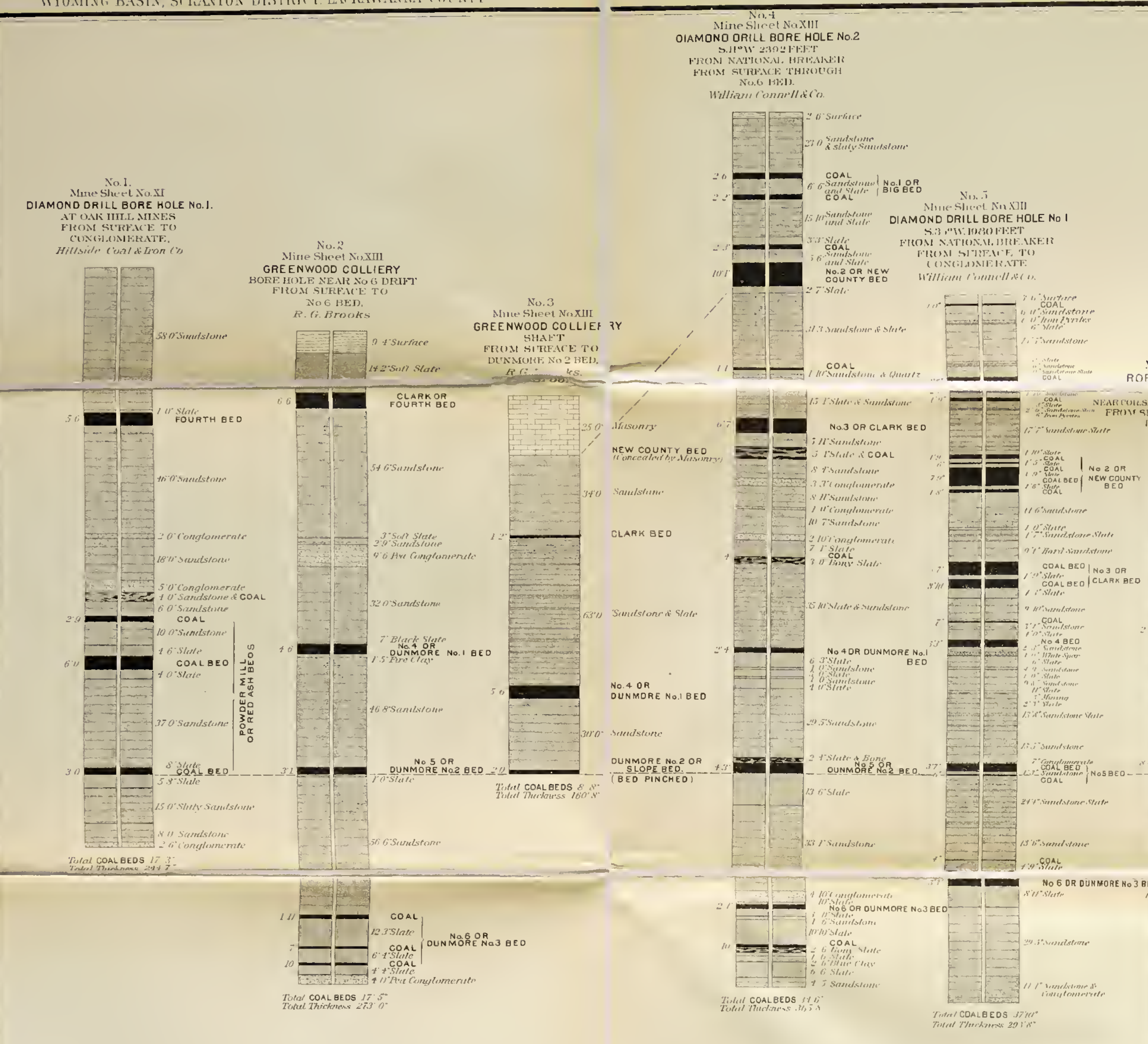


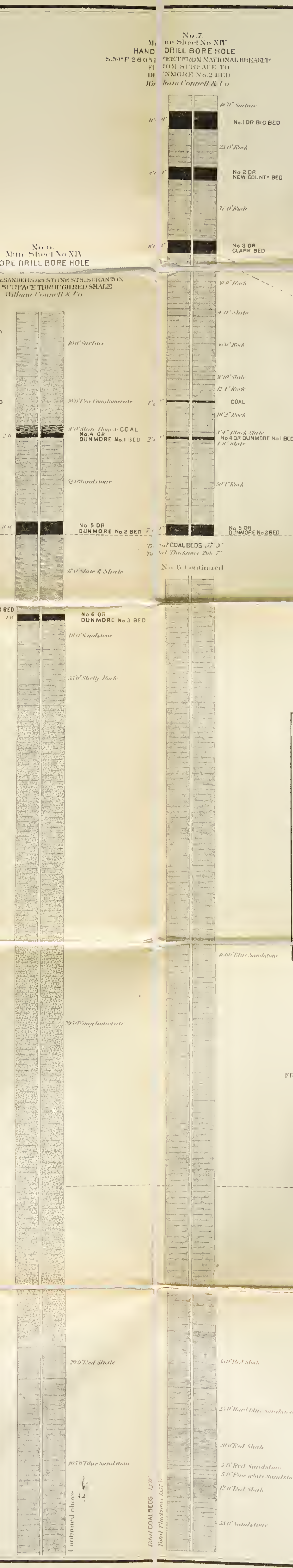
GEOLOGICAL SURVEY OF PENNSYLVANIA. J. P. LESLEY, STATE GEOLOGIST.

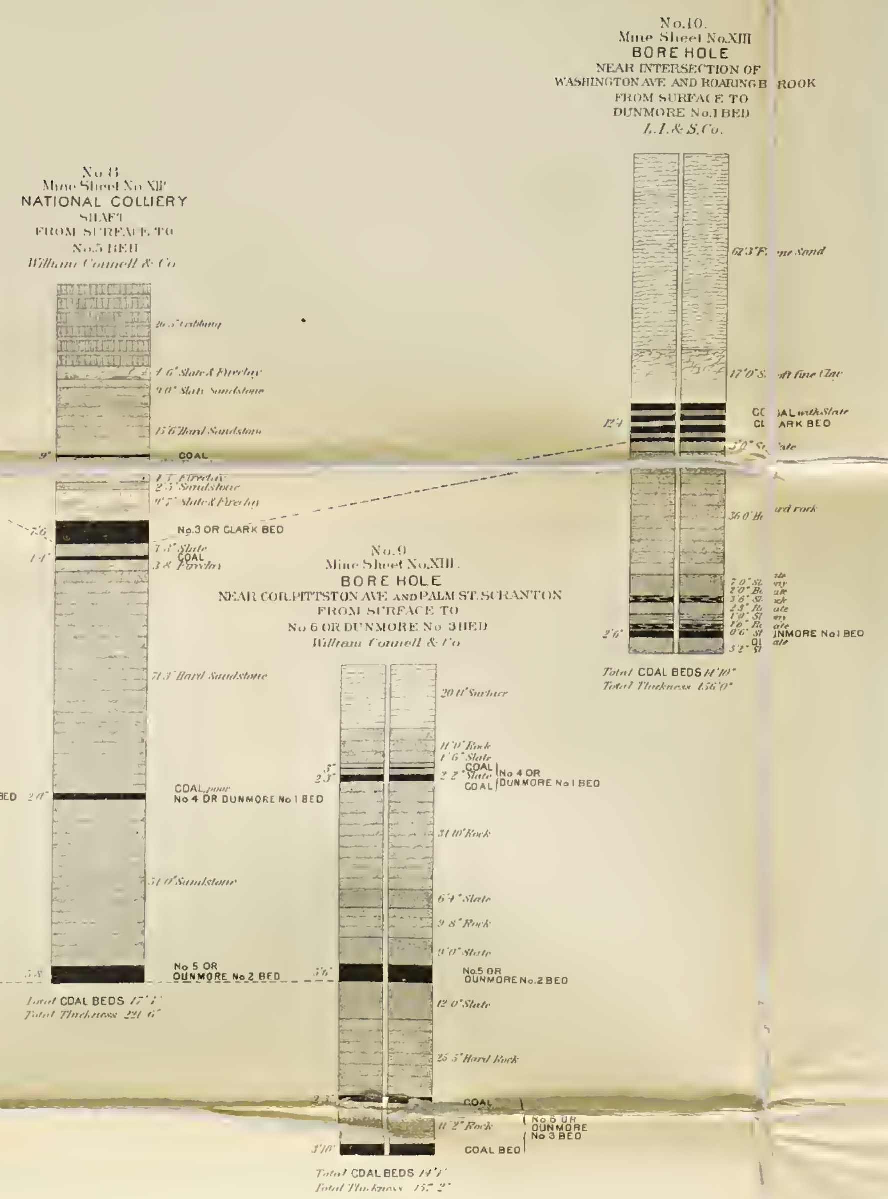
ANTHRACITE DISTRICT. FRANK A. HILL, GEOLOGIST IN CHARGE.

WYOMING BASIN, SCRANTON DISTRICT, LACKAWANNA COUNTY

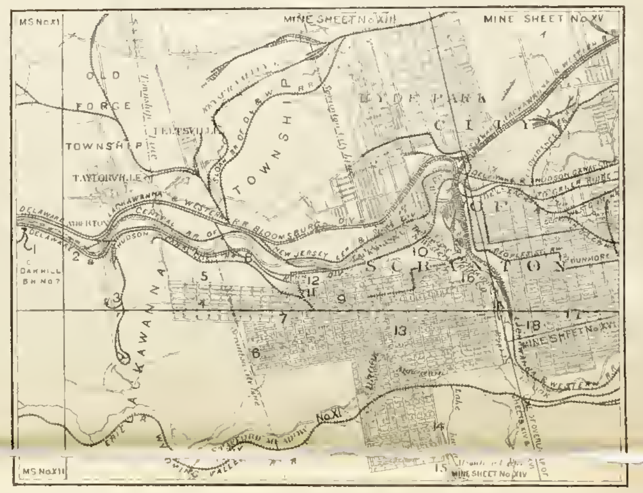
NORTHERN COAL FIELD, COLUMNAR SECTION SHEET No. IX

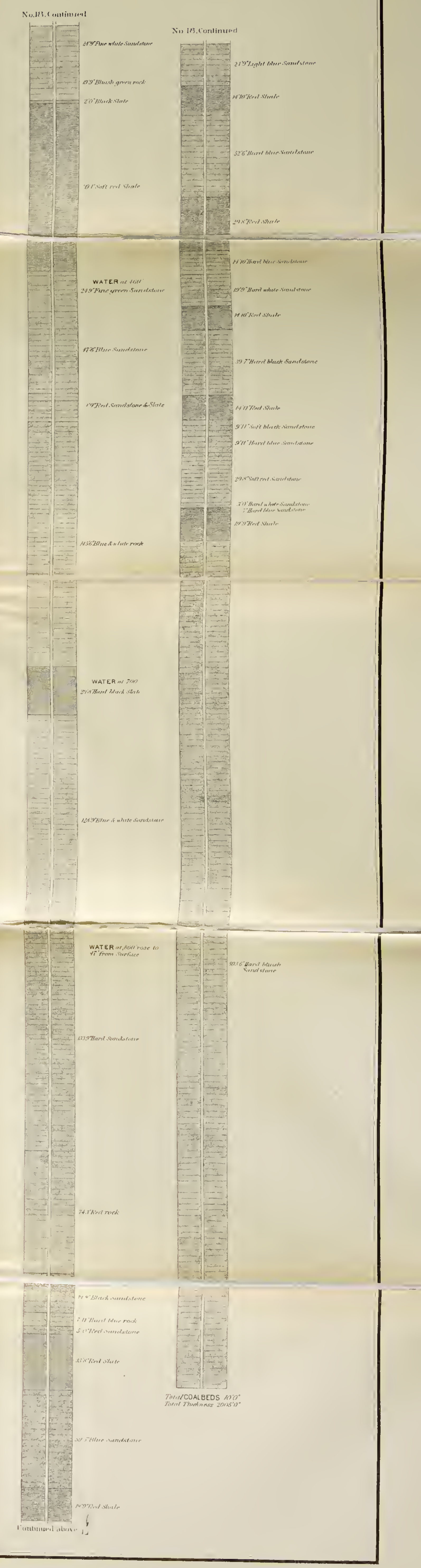

No. 1. Mine Sheet No. XI DIAMOND DRILL BORE HOLE No. 1. AT OAK HILL MINES FROM SURFACE TO CONGLOMERATE. Hillside Coal & Iron Co.
No. 2 Mine Sheet No. XIII GREENWOOD COLLIERY BORE HOLE NEAR No. 6 DRIFT FROM SURFACE TO No. 6 BED. R. G. Brooks
No. 3 Mine Sheet No. XIII GREENWOOD COLLIERY SHAFT FROM SURFACE TO DUNMORE No. 2 BED. R. G. Brooks
No. 4 Mine Sheet No. XIII DIAMOND DRILL BORE HOLE No. 2 FROM NATIONAL BREAKER FROM SURFACE THROUGH No. 6 BED. William Connell & Co.
No. 5 Mine Sheet No. XIII DIAMOND DRILL BORE HOLE No. 1 FROM NATIONAL BREAKER FROM SURFACE TO CONGLOMERATE. William Connell & Co.
CLARK OR FOURTH BED
No. 4 OR DUNMORE No. 1 BED
No. 5 OR DUNMORE No. 2 BED
No. 6 OR DUNMORE No. 3 BED
POWDER MILL OR RED ASH BEDS


No. 6. Mine Sheet No. XIV ROPE DRILL BORE HOLE FROM SURFACE THROUGH RED SHALE William Connell & Co.
No. 7 Mine Sheet No. XIV HAND DRILL BORE HOLE FROM SURFACE TO DUNMORE No. 2 BED William Connell & Co.
No. 6 Continued
Continued above


No. 8 Mine Sheet No. XIII NATIONAL COLLIERY SHAFT FROM SURFACE TO No. 5 BED William Connell & Co.
No. 9 Mine Sheet No. XIII BORE HOLE FROM SURFACE TO No. 6 OR DUNMORE No. 3 BED William Connell & Co.
No. 10 Mine Sheet No. XIII BORE HOLE NEAR INTERSECTION OF WASHINGTON AVE AND ROARING BROOK FROM SURFACE TO DUNMORE No. 1 BED L. I. & S. Co.

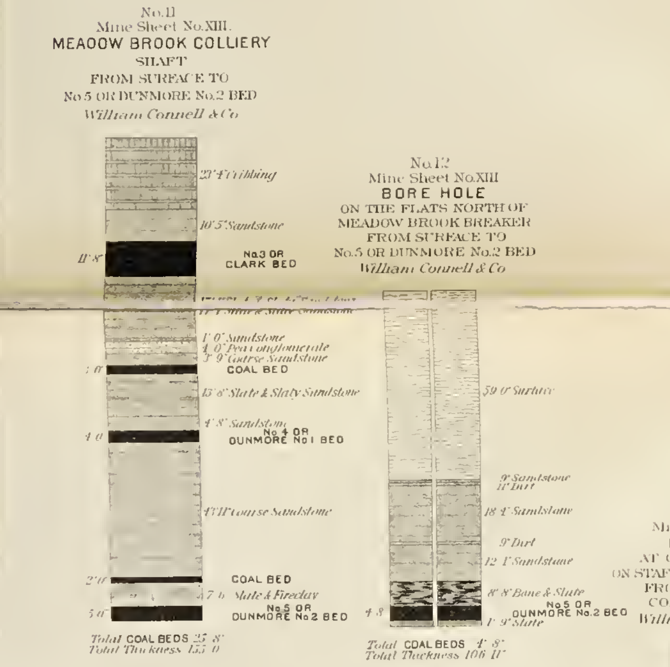
SKELETON MAP
OF PART OF
MINE SHEETS Nos. XI, XII, XIII AND XIV
SHOWING THE
POSITION OF COLUMNAR SECTIONS
ON SHEET IX
Scale, 1 mile to 1 inch.

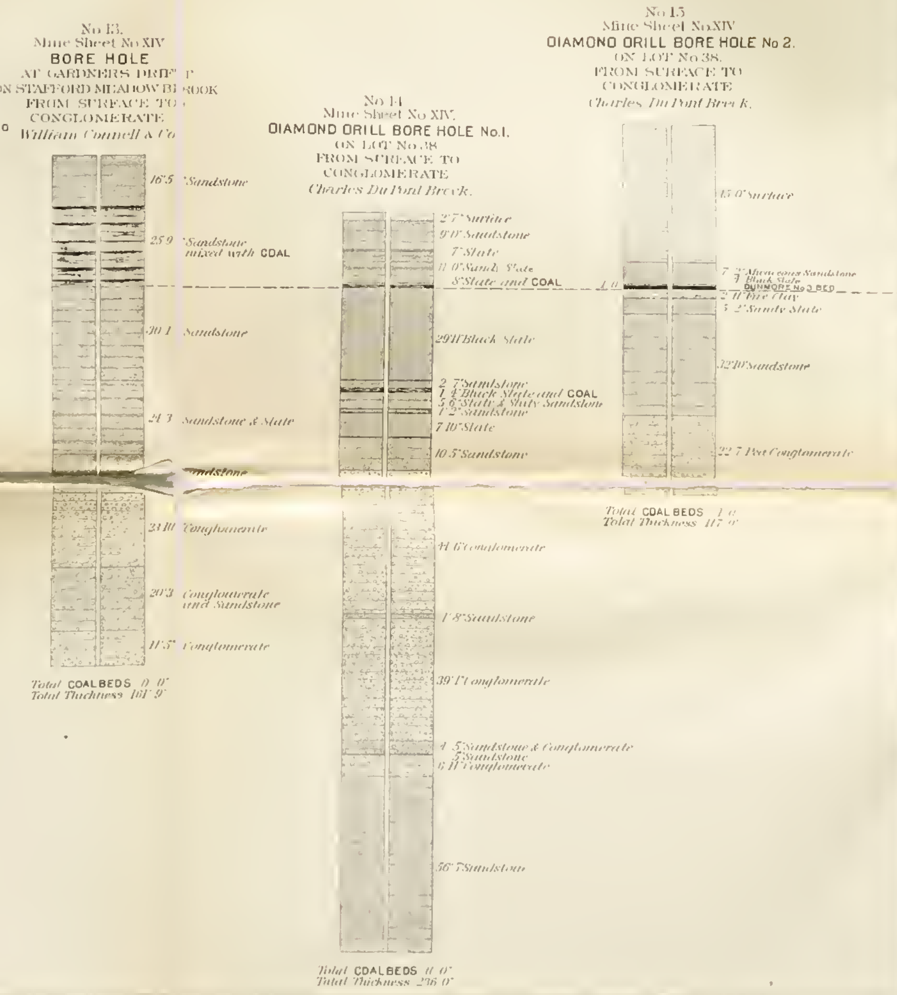

MS No XI
MINE SHEET No XIII
MINE SHEET No XV
OLD FORGE TOWNSHIP
HYDE PARK
CITY
TOWNSHIP
LACKAWANNA

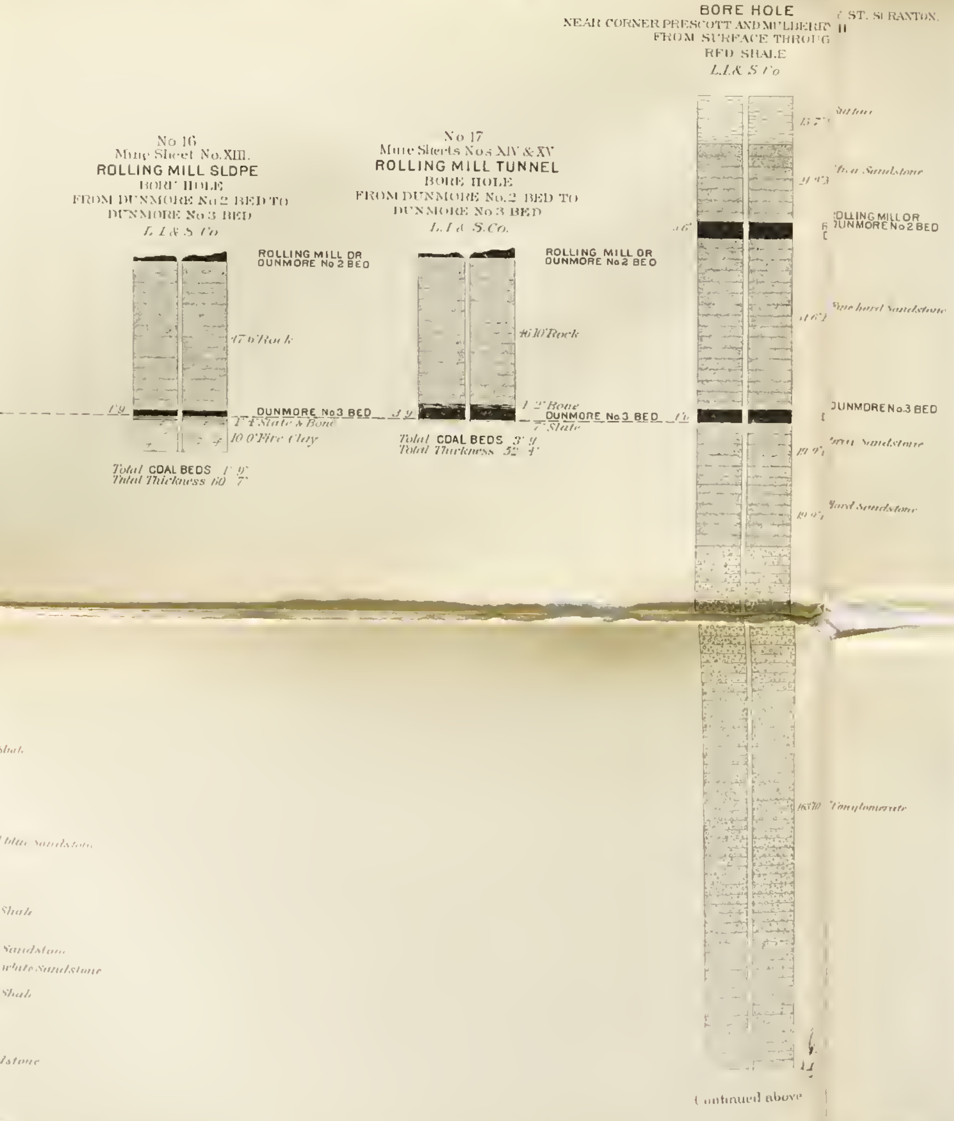

No. 18 Continued
No. 19 Continued
Total COALBEDS
Continued above

COLUMNAR SECTIONS
OF THE
COAL MEASURES
IN THE VICINITY OF
MINOOKA, SCRANTON AND DUNMORE,
LACKAWANNA COUNTY.
CONSTRUCTED FROM MEASUREMENTS
OBTAINED FROM THE
COMPANIES NAMED IN THE INDIVIDUAL TITLES.
AND FROM THOSE MADE BY THE
GEOLOGICAL SURVEY.

Scale 40 feet to 1 inch.


No. 11 Mine Sheet No. XIII MEADOW BROOK COLLIERY SHAFT FROM SURFACE TO No. 5 OR DUNMORE No. 2 BED William Connell & Co.
No. 12 Mine Sheet No. XIII BORE HOLE ON THE FLATS NORTH OF MEADOW BROOK BREAKER FROM SURFACE TO No. 5 OR DUNMORE No. 2 BED William Connell & Co.


No. 13. Mine Sheet No. XIV BORE HOLE FROM SURFACE TO CONGLOMERATE William Connell & Co.
No. 14 Mine Sheet No. XIV DIAMOND DRILL BORE HOLE No. 1 FROM SURFACE TO CONGLOMERATE Charles Du Pont Breck
No. 15 Mine Sheet No. XIV DIAMOND DRILL BORE HOLE No. 2 FROM SURFACE TO CONGLOMERATE Charles Du Pont Breck


No. 16 Mine Sheet No. XIII ROLLING MILL SLOPE FROM DUNMORE No. 2 BED TO DUNMORE No. 3 BED L. I. & S. Co.
No. 17 Mine Sheets Nos XIV & XV ROLLING MILL TUNNEL FROM DUNMORE No. 2 BED TO DUNMORE No. 3 BED L. I. & S. Co.
No. 18 Mine Sheets Nos XIV & XV BORE HOLE FROM SURFACE THROUGH RED SHALE L. I. & S. Co.
Continued above

NOTES

1 The strata [illegible] been named locally and [illegible] of these sections hav[illegible] consequently a similarity of name does not necessarily indicate a similarity in the character of the strata and vice versa

2. Sections Nos. 8 and 11 were measured by the Geological Survey, and to them Note No. 1 does not apply

3 Section No. 1 was constructed from the records of the Hillside Coal and Iron Company; Sections Nos 2 and 3 from those of Mr R G Brooks, Sections Nos 4, 5, 6, 7, 9, 12 and 13 from those of William Connell & Company, Sections Nos 10, 16, 17 and 18 from those of the Lackawanna Iron and Steel Company and Sections Nos 14 and 15 from those of Mr. Charles Du Pont Breck

4 The thicknesses assigned to the individual strata are their true thicknesses perpendicular to the bedding. The thicknesses of the coal beds are shown as cut in the bore hole, shaft or tunnel which the section represents and do not necessarily show the thickness of the bed where worked at other points

5 The thickness of the coal beds shown in these sections does not represent the thickness of the coal alone, but includes the refuse material of the bed

6 Section No. 1 was published in Northern Coal Field Atlas part II (see Section No. 26 Columnar Section Sheet No. VIII) but is reproduced here to show the geological connection between the Sections on Sheets Nos VIII and IX

WILLIAM GRIFFITH, ASSISTANT GEOLOGIST.
ROBERT A. QUIN, GEORGE W. MILNES, WILBUR F. SMITH. ASSISTANTS

Scale of Coal Measure Sections 40 Feet to 1 Inch

AUGUST 1888

REFERENCE SURVEY MAPS AND SECTIONS
NORTHERN COAL FIELD MINE SHEETS Nos XI, XII, XIII AND XIV; CROSS SECTION SHEETS.

ATLAS NORTHERN ANTHRACITE FIELD. PART 3. COLUMNAR SECTION SHEET NO. IX. 5.

A A.

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v.1, pt.3
Geology

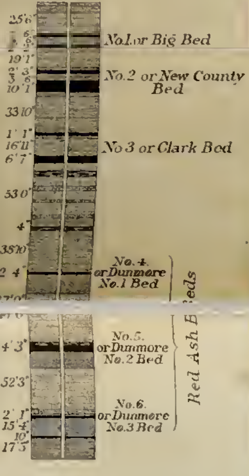
GEOLOGICAL SURVEY OF PENNSYLVANIA. J. P. LESLEY, STATE GEOLOGIST

ANTHRACITE DISTRICT, FRANK A. HILL, GEOLOGIST IN CHARGE

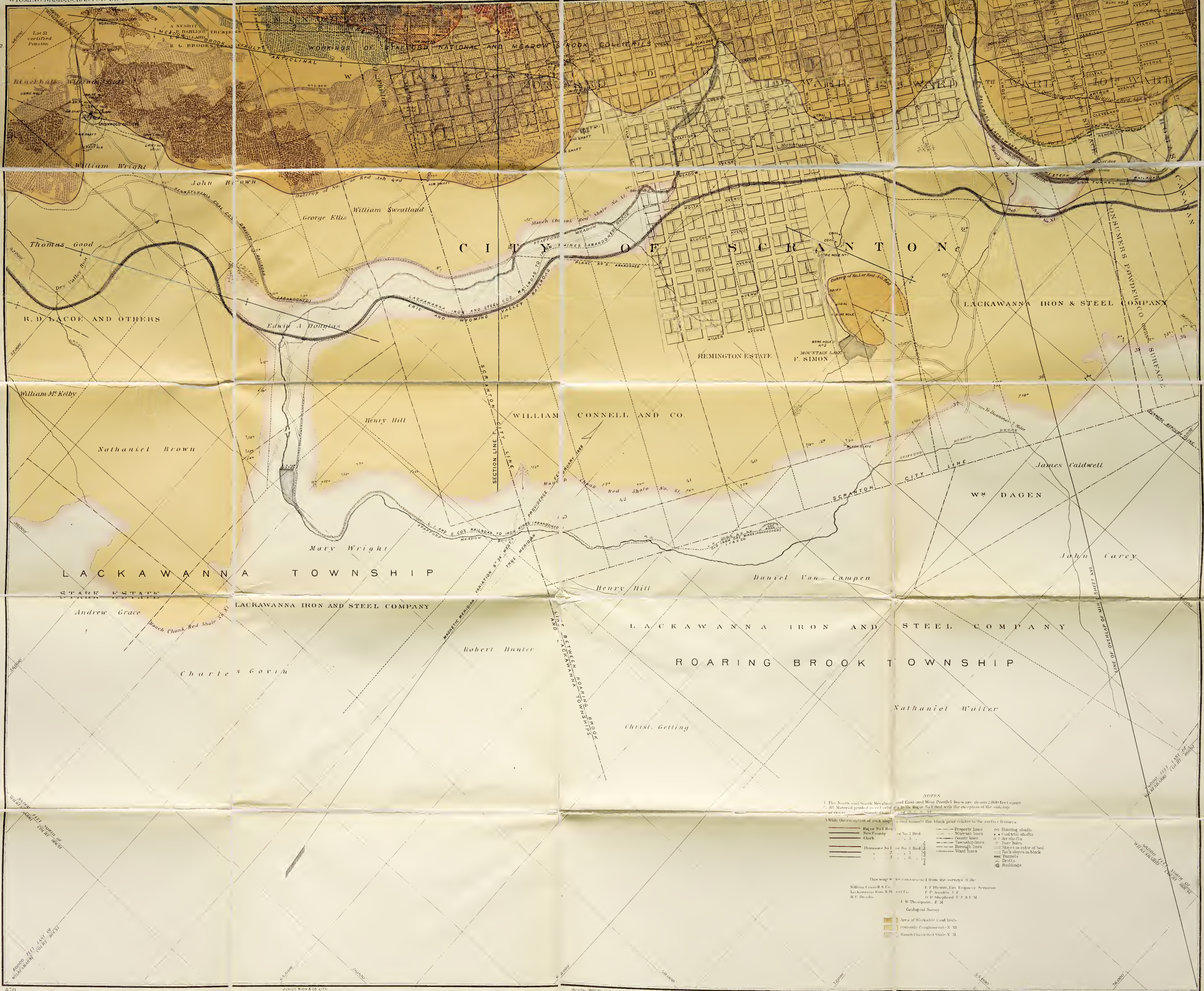
WYOMING BASIN, SCRANTON DISTRICT, LACKAWANNA COUNTY.

NORTHERN COAL FIELD MINE SHEET No XIV

SECTION OF COAL MEASURES
SOUTH SCRANTON SHEET
DIAMOND DRILL BORE HOLE No 2.
WILLIAM CONNELL & CO.


25'6"
No. 1 or Big Bed
19'1"
No. 2 or New County Bed
33'10"
No 3 or Clark Bed
53'0"
35'10"
No. 4. or Dunmore No. 1 Bed
No. 5. or Dunmore No. 2 Bed
52'3"
No. 6. or Dunmore No. 3 Bed
Red Ash Beds
17'5"

Scale 100'-1"


CITY OF SCRANTON
LACKAWANNA TOWNSHIP
ROARING BROOK TOWNSHIP
LACKAWANNA IRON & STEEL COMPANY
LACKAWANNA IRON AND STEEL COMPANY
WILLIAM CONNELL AND CO.
R. D. LACOE AND OTHERS
REMINGTON ESTATE
F. SIMON
STARK ESTATE
Nathaniel Brown
William McKelby
Thomas Good
Edwin A. Douglas
George Ellis
William Swetland
John Brown
William Wright
Henry Hill
Mary Wright
Andrew Grace
Charles Govin
Robert Hunter
Christ. Getting
Daniel Van Campen
James Caldwell
Wm DAGEN
John Carey
Nathaniel Waller
Lot 51 certified Pittston
WORKINGS OF STAFFORD NATIONAL AND MEADOW BROOK COLLIERIES
ANTICLINAL
Blackball Whitman Shaft
GREENWOOD COLLIERY
Outcrop of No. 5 or Red Ash Bed
Mauch Chunk Red Shale No. XI
PENNSYLVANIA COAL CO'S GRAVITY RAILROAD
LACKAWANNA IRON AND STEEL CO'S RAILROAD
ERIE AND WYOMING VALLEY RAILROAD
L. I. AND S. CO'S RAILROAD TO IRON MINES (ABANDONED)
Dry Valley Run
STAFFORD MEADOW BROOK
Roaring Brook
PLANE No 3 ABANDONED
SCRANTON CITY LINE
SECTION LINE
LINE BETWEEN ROARING BROOK AND LACKAWANNA TOWNSHIPS
MAGNETIC MERIDIAN VARIATION 6° 34' WEST
TRUE MERIDIAN
LINE OF OVERLAP OF MINE SHEET No XV
CONSUMERS POWDER CO.
To Dunmore 2 Miles
JANUARY 1888
Outcrop of No. 5 or Red Ash Bed
BORE HOLE No 2
MOUNTAIN LAKE
WARD
CANAL
48,000' WILKESBARRE COURT HOUSE
60,000 FEET EAST OF WILKESBARRE COURT HOUSE
74,000 FEET EAST OF WILKESBARRE COURT HOUSE
48000 FEET NORTH OF WILKESBARRE COURT HOUSE
64,000'
68,000'
72,000'
76,000'
44,000'
40,000'
42,000'
52,000'

NOTES

1 The North and South Meridian and East and West Parallel lines are drawn 2,000 feet apart
2. All Material printed in red relates to the Big or No 1 Bed with the exception of the outcrop of the Mauch Chunk Red Shale No. XI
3 With the exception of rock slopes and tunnels the black print relates to the surface features

—	Big or No 1 Bed
—	New County or No. 2 Bed
—	Clark or No. 3 Bed
—	Dunmore No 1 or No 4 Bed (Red Ash beds)
—	Dunmore No 2 or No 5 Bed (Red Ash beds)
—	Dunmore No 3 or No 6 Bed (Red Ash beds)

— — —	Property lines
- - -	Warrant lines
—•—•	County lines
—•—•	Township lines
—•—•	Borough lines
—•—•	Ward lines
▭	Hoisting shafts
•	Coal trial shafts
□	Air shafts
○	Bore holes
═	Slopes in color of bed
═	Rock slopes in black
▬	Tunnels
⌒	Drifts
▨	Buildings

This map was constructed from the surveys of the

William Connell & Co	E. F. Blewitt, City Engineer, Scranton
Lackawanna Iron & Steel Co	F. P. Ansden C. E.
R. C. Brooks	O. D. Shepherd C. E. & E. M.

C. W. Thompson, E. M.
Geological Survey

▨	Area of Workable Coal Beds
▨	Pottsville Conglomerate No. XII
▨	Mauch Chunk Red Shale No. XI

470.

WILLIAM GRIFFITH, Assistant Geologist

ROBERT A. QUIN
GEORGE W. MILNES Assistants
WILBUR F. SMITH

JULIUS BIEN & CO. LITH

Scale 800 Feet to 1 Inch

JUNE 1888

E. K. MEYERS STATE PRINTER

Center of Prospect Ave. and Locust Street 10.60 miles north of Wilkes Barre Court House
" " " " 10.86 " east " " "
Latitude of Monument, Wilkes Barre Court House yard (observed) 41° 14' 40" 48
Longitude " " " " east of Washington 1° 10' 3" 6
Latitude of Scranton Court House (U. S. Coast and Geodetic Survey) 41° 24' 29"
Longitude " " " East of Washington 1° 23' 13.6"

ATLAS NORTHERN ANTHRACITE FIELD. PART II. MINE SHEET NO. XV.

3.

A A.

557 Geology
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AA
Atlas
v1, pt.3

WYOMING BASIN, SCRANTON DISTRICT, LACKAWANNA COUNTY

GEOLOGICAL SURVEY OF PENNSYLVANIA. J. P. LESLEY, STATE GEOLOGIST.

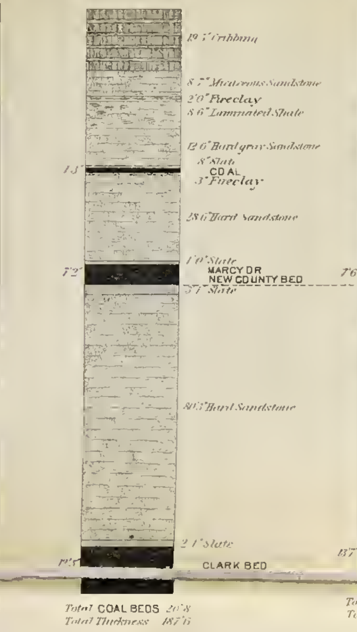
ANTHRACITE DISTRICT. FRANK A. HILL, GEOLOGIST IN CHARGE.

NORTHERN COAL FIELD, COLUMNAR SECTION SHEET No. X

COLUMNAR SECTIONS
OF THE
COAL MEASURES
IN THE VICINITY OF
TAYLORVILLE AND HYDE PARK,
LACKAWANNA COUNTY.
CONSTRUCTED FROM MEASUREMENTS
OBTAINED FROM THE
COMPANIES NAMED IN THE INDIVIDUAL TITLES,
AND FROM THOSE MADE BY THE
GEOLOGICAL SURVEY.

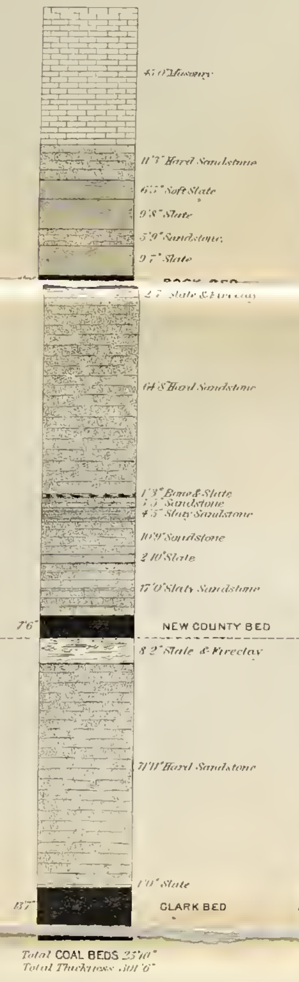
Scale 40 feet to 1 inch

No. 1.
Mine Sheet No. XI
SIBLEY COLLIERY
FROM SURFACE TO
CLARK BED
Elliot M'Clure & Co.



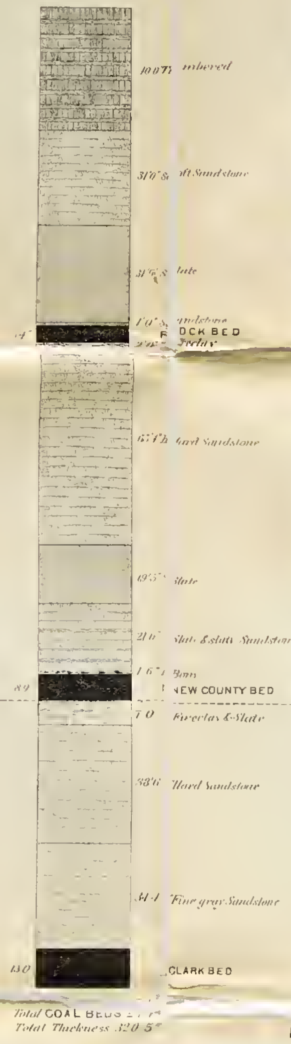
COAL
MARCY OR NEW COUNTY BED
CLARK BED
Total COAL BEDS 20'8
Total Thickness 187'6

No. 2.
Mine Sheet No. XIII
PYNE COLLIERY
SHAFT
FROM SURFACE TO
CLARK BED
D.L.&W.R.R.Co.



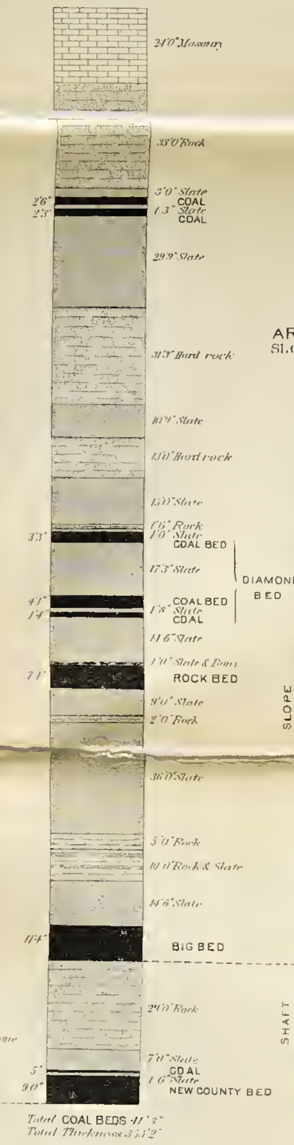
NEW COUNTY BED
CLARK BED
Total COAL BEDS
Total Thickness

No. 3.
Mine Sheet No. XIII
PYNE COLLIERY
ROCK SLOPE
FROM SURFACE TO
CLARK BED
D.L.&W.R.R.Co.



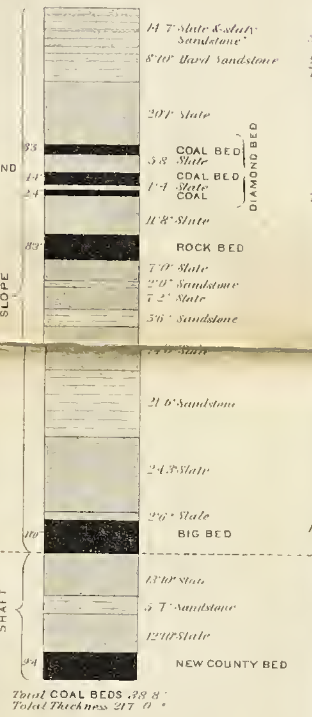
ROCK BED
NEW COUNTY BED
CLARK BED
Total COAL BEDS
Total Thickness

No. 4.
Mine Sheet No. XIII
ARCHBALD COLLIERY
SHAFT
FROM SURFACE TO
NEW COUNTY BED
D.L.&W.R.R.Co.



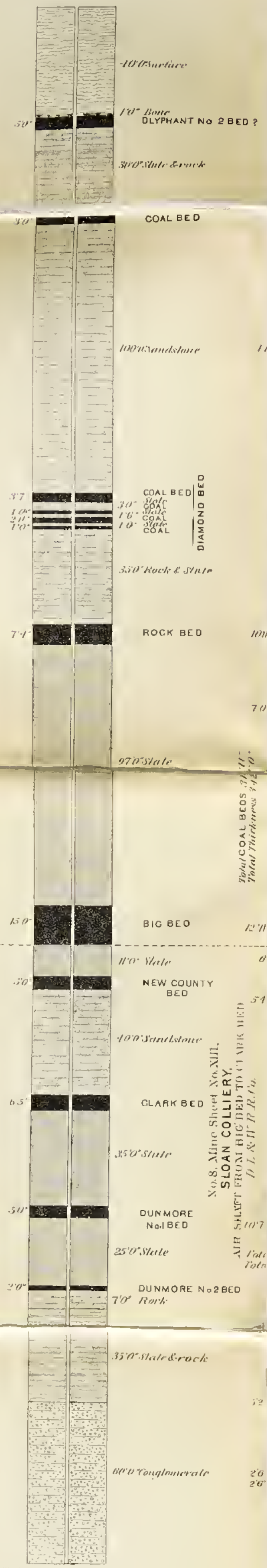
COAL
COAL BED
DIAMOND BED
ROCK BED
BIG BED
NEW COUNTY BED
Total COAL BEDS
Total Thickness

No. 5
Mine Sheet No. XIII
ARCHBALD COLLIERY
SLOPE & INSIDE AIR SHAFT
FROM SURFACE TO
NEW COUNTY BED
D.L.&W.R.R.Co.



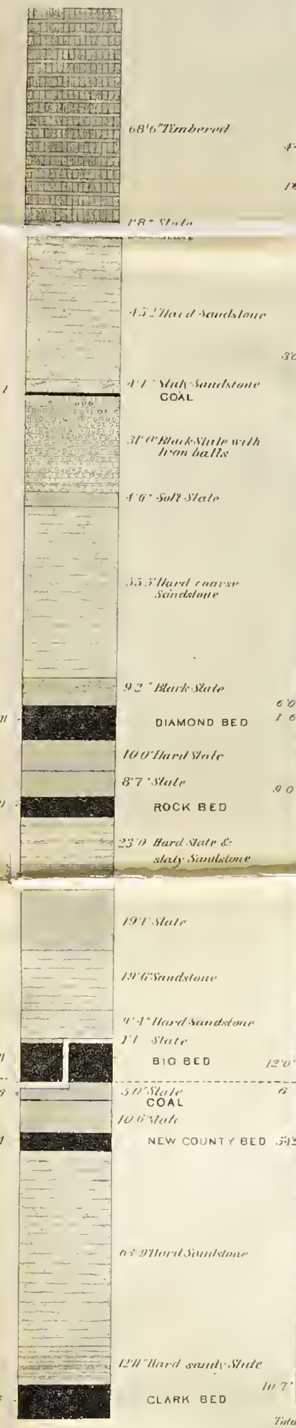
SLOPE
SHAFT
COAL BED
DIAMOND BED
ROCK BED
BIG BED
NEW COUNTY BED
Total COAL BEDS
Total Thickness

No. 6
Mine Sheet No. XIII
BELLEVUE COLLIERY
BORE HOLE
FROM SURFACE TO
CONGLOMERATE
D.L.&W.R.R.Co.



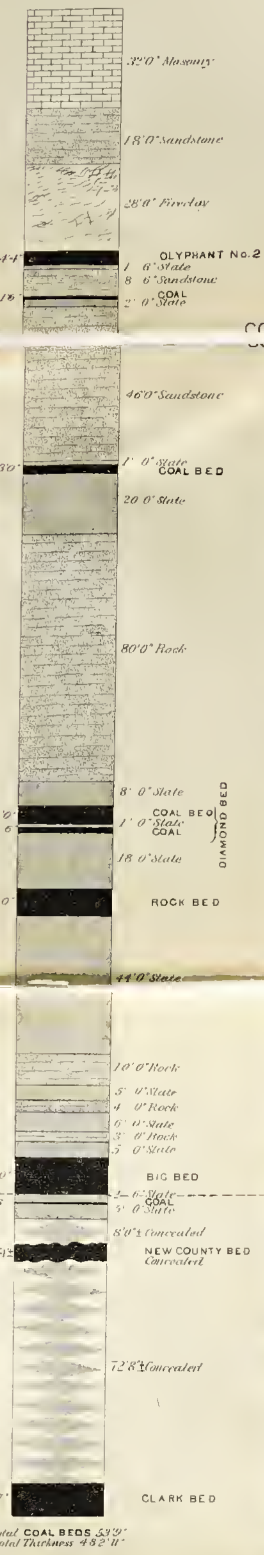
OLYPHANT No. 2 BED ?
COAL BED
DIAMOND BED
ROCK BED
BIG BED
NEW COUNTY BED
CLARK BED
DUNMORE No. 1 BED
DUNMORE No. 2 BED
No. 8, Mine Sheet No. XIII, SLOAN COLLIERY
Total COAL BEDS
Total Thickness

No. 7
Mine Sheet No. XIII
SLOAN COLLIERY
ROCK SLOPE
FROM SURFACE TO
BIG BED
D.L.&W.R.R.Co.



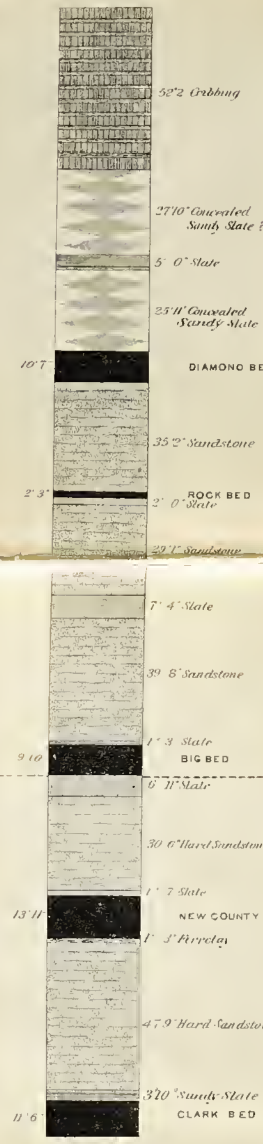
COAL
DIAMOND BED
ROCK BED
BIG BED
NEW COUNTY BED
CLARK BED
Total COAL BEDS
Total Thickness

No. 9
Mine Sheet No. XIII
SLOAN COLLIERY
SHAFT
FROM SURFACE TO
CLARK BED
D.L.&W.R.R.Co.



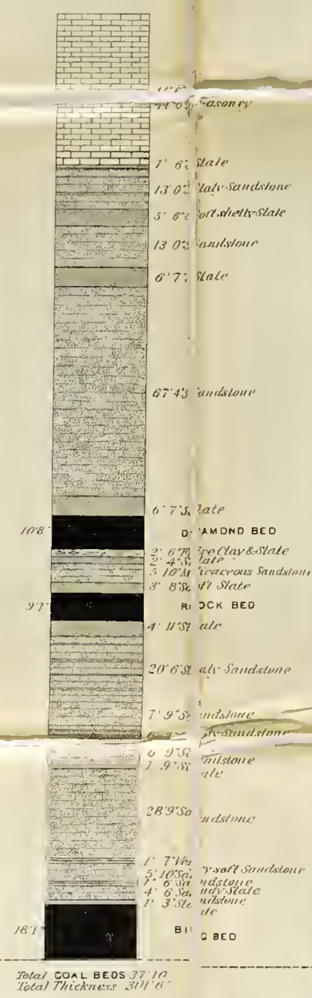
OLYPHANT No. 2 BED ?
COAL
COAL BED
DIAMOND BED
ROCK BED
BIG BED
NEW COUNTY BED
CLARK BED
Total COAL BEDS 53'9"
Total Thickness 482'11"

No. 10
Mine Sheet No. XIII
CONTINENTAL COLLIERY
SHAFT
FROM SURFACE TO
CLARK BED
D.L.&W.R.R.Co.



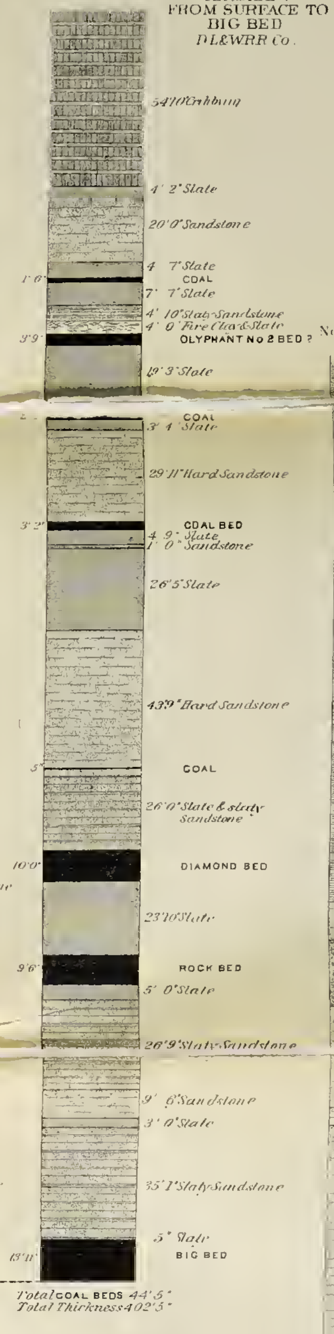
DIAMOND BED
ROCK BED
BIG BED
NEW COUNTY BED
CLARK BED
Total COAL BEDS 48'1"
Total Thickness 365'4"

No. 11
Mine Sheet No. XIII
CENTRAL COLLIERY
SHAFT
FROM SURFACE TO
BIG BED
D.L.&W.R.R.Co.



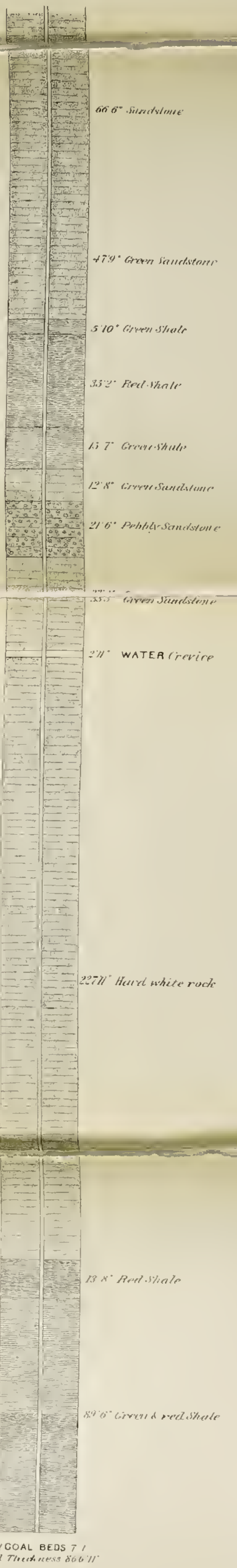
DIAMOND BED
ROCK BED
BIG BED
Total COAL BEDS
Total Thickness

No. 12
Mine Sheet No. XIII
CENTRAL COLLIERY
AIRSHAFT
FROM SURFACE TO
BIG BED
D.L.&W.R.R.Co.



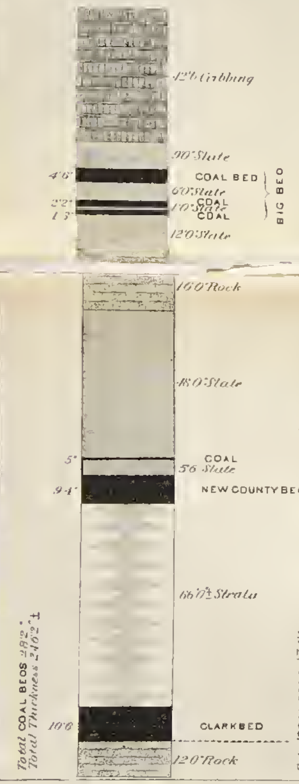
COAL
OLYPHANT No. 2 BED ?
COAL BED
DIAMOND BED
ROCK BED
BIG BED
Total COAL BEDS
Total Thickness

No. 19 Continued



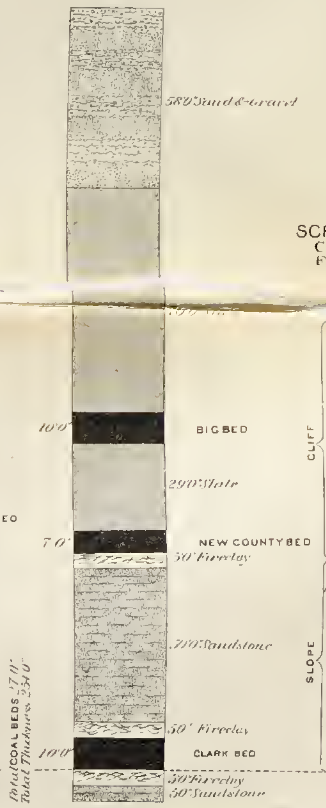
WATER Crevice
Total COAL BEDS
Total Thickness

No. 13.
Mine Sheet No. XIII
TAYLOR COLLIERY
SHAFT
FROM SURFACE TO
CLARK BED
D.L.&W.R.R.Co



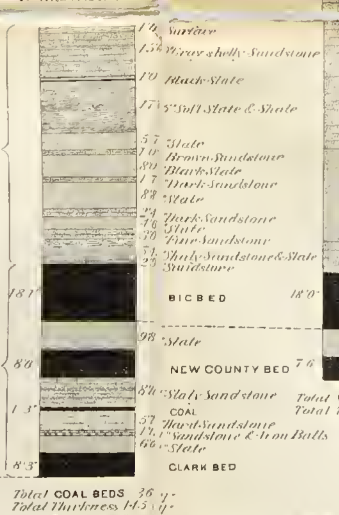
COAL BED
COAL
BIG BED
NEW COUNTY BED
CLARK BED
Total COAL BEDS
Total Thickness

No. 14
Mine Sheet No. XIII
HOLDEN COLLIERY
SHAFT
FROM SURFACE TO
CLARK BED
D.L.&W.R.R.Co



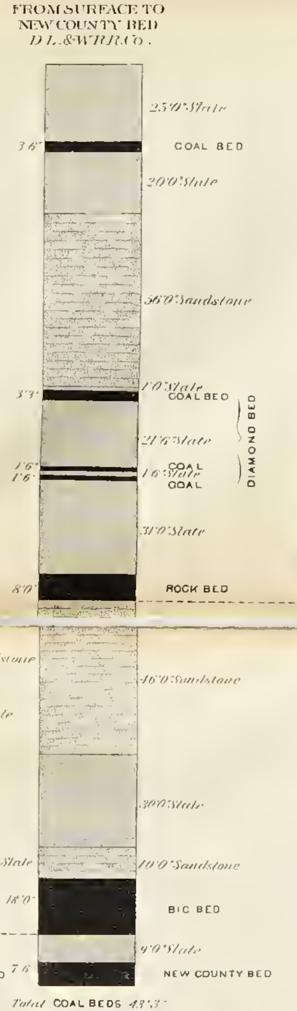
BIG BED
NEW COUNTY BED
CLARK BED
Total COAL BEDS
Total Thickness

No. 15
Mine Sheet No. XIII
SCRANTON COLLIERY
CLIFF & ROCK SLOPE
FROM SURFACE TO
CLARK BED
D.L.&W.R.R.Co.



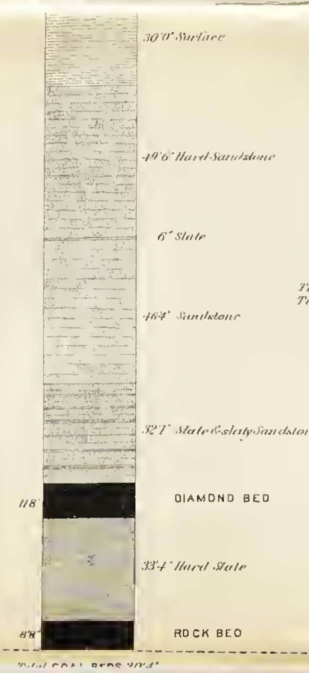
CLIFF
SLOPE
BIG BED
NEW COUNTY BED
COAL
CLARK BED
Total COAL BEDS
Total Thickness

No. 16
Mine Sheet No. XIII
DODGE COLLIERY
SHAFT
FROM SURFACE TO
NEW COUNTY BED
D.L.&W.R.R.Co.



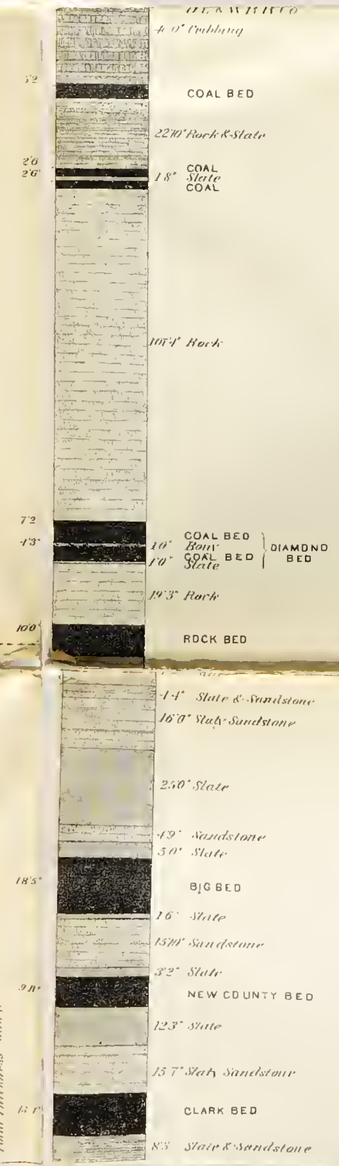
COAL BED
COAL
DIAMOND BED
ROCK BED
BIG BED
NEW COUNTY BED
Total COAL BEDS
Total Thickness

No. 17
Mine Sheet No. XIII
BELLEVUE COLLIERY
ROCK SLOPE
FROM SURFACE TO
ROCK BED
D.L.&W.R.R.Co.



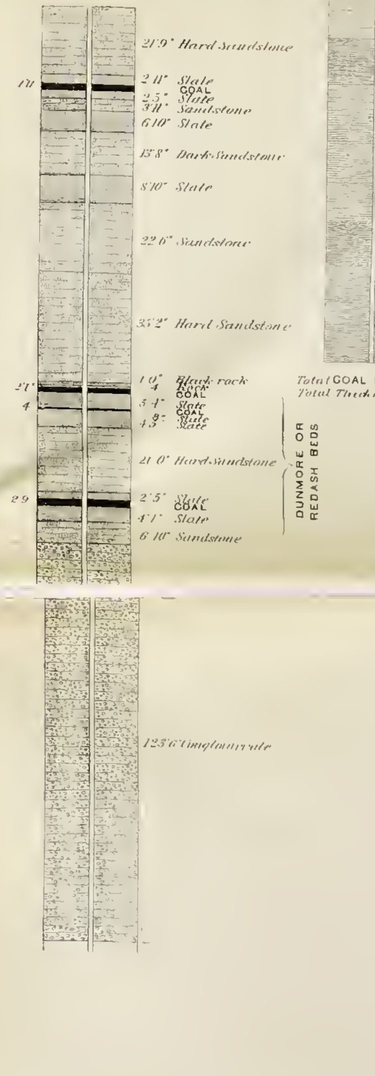
DIAMOND BED
ROCK BED
Total COAL BEDS
Total Thickness

No. 18
Mine Sheet No. XIII
OXFORD COLLIERY
SHAFT
FROM SURFACE TO
CLARK BED
D.L.&W.R.R.Co.



COAL BED
COAL
DIAMOND BED
ROCK BED
BIG BED
NEW COUNTY BED
CLARK BED
Total COAL BEDS
Total Thickness

No. 19
Mine Sheet No. XIII
BORE HOLE FOR WATER
WEST OF
CONTINENTAL SHAFT
FROM SURFACE TO
RED SHALE
D.L.&W.R.R.Co.

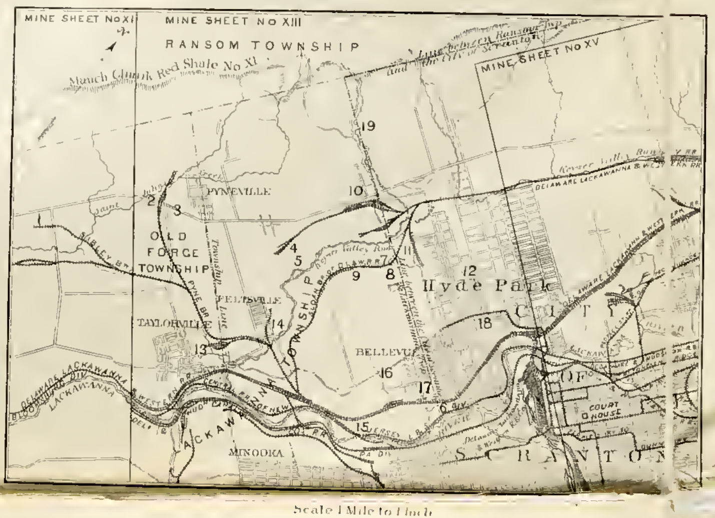


COAL
DUNMORE OR REDASH BEDS

NOTE A

The second bed cut in the Sibley shaft is known locally as the Clark bed but seems to be identical with the New County bed of the Scranton district (See Section No. 21 Columnar Section sheet No. VII.)

SKELETON MAP
OF
MINE SHEET No. XIII
AND PART OF Nos. XI AND XV
SHOWING THE
POSITION OF COLUMNAR SECTIONS
ON SHEET X



MINE SHEET No XI
MINE SHEET No XIII
RANSOM TOWNSHIP
MINE SHEET No XV
Mauch Chunk Red Shale No XI
OLD FORGE TOWNSHIP
Hyde Park
MINOOKA
SCRANTON
COURT HOUSE
19
10
15
17
18

Scale 1 Mile to 1 inch

NOTES.

1. *The strata composing some of these sections have been named locally and consequently a similarity of name does not necessarily indicate a similarity in the character of the strata and vice versa.*
2. *Sections Nos. 1, 2, 3, 5, 7, 8, 10, 11, 12, 15 and 17 were constructed from measurements made by the Geological Survey and to them Note No. 1 does not apply.*
3. *Sections Nos. 4, 6, 9, 13, 14, 16 and 19 were constructed from the records of the Delaware Lackawanna and Western Railroad Company and Section No. 18 from the records of the same Company and measurements made by the Geological Survey.*
4. *The thicknesses assigned to the individual strata are their true thicknesses perpendicular to the bedding. The thicknesses of the coal beds are shown as cut in the bore hole shaft or tunnel which the section represents and do not necessarily show the average thicknesses of the beds where worked at other points.*
5. *The thickness of the coal beds shown in these sections does not represent the thickness of the coal alone, but includes the refuse material of the bed.*
6. *A part of Section No. 1 was published in Northern Coal Field Atlas Part II (see Section No. 21, Columnar Section Sheet No. VII) but is reproduced here to show the geological connection between the sections on Sheets VII and X.*

Scale of Coal Measure Sections 40 Feet to 1 Inch

FEET 40 30 20 10 0 40 80 120 160 200

10 5 0 10 20 30 40 50 60 METERS

WILLIAM GRIFFITH, ASSISTANT GEOLOGIST

ROBERT A. QUIN,
GEORGE W. MILNES,
WILBUR F. SMITH, ASSISTANTS.

AUGUST 1888.

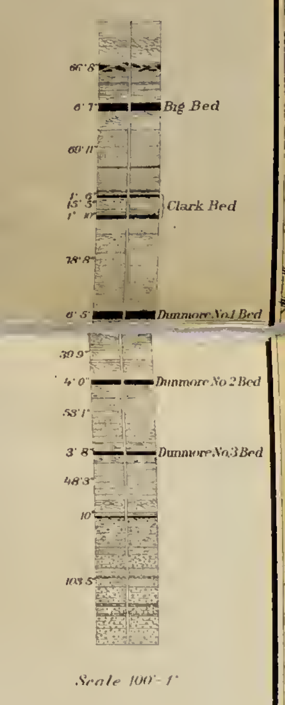
REFERENCE SURVEY MAPS AND SECTIONS
NORTHERN COAL FIELD { MINE SHEETS Nos. XI AND XIII. CROSS SECTION SHEETS

GEOLOGICAL SURVEY OF PENNSYLVANIA. J. P. LESLEY, STATE GEOLOGIST
ANTHRACITE DISTRICT. FRANK A. HILL, GEOLOGIST IN CHARGE.

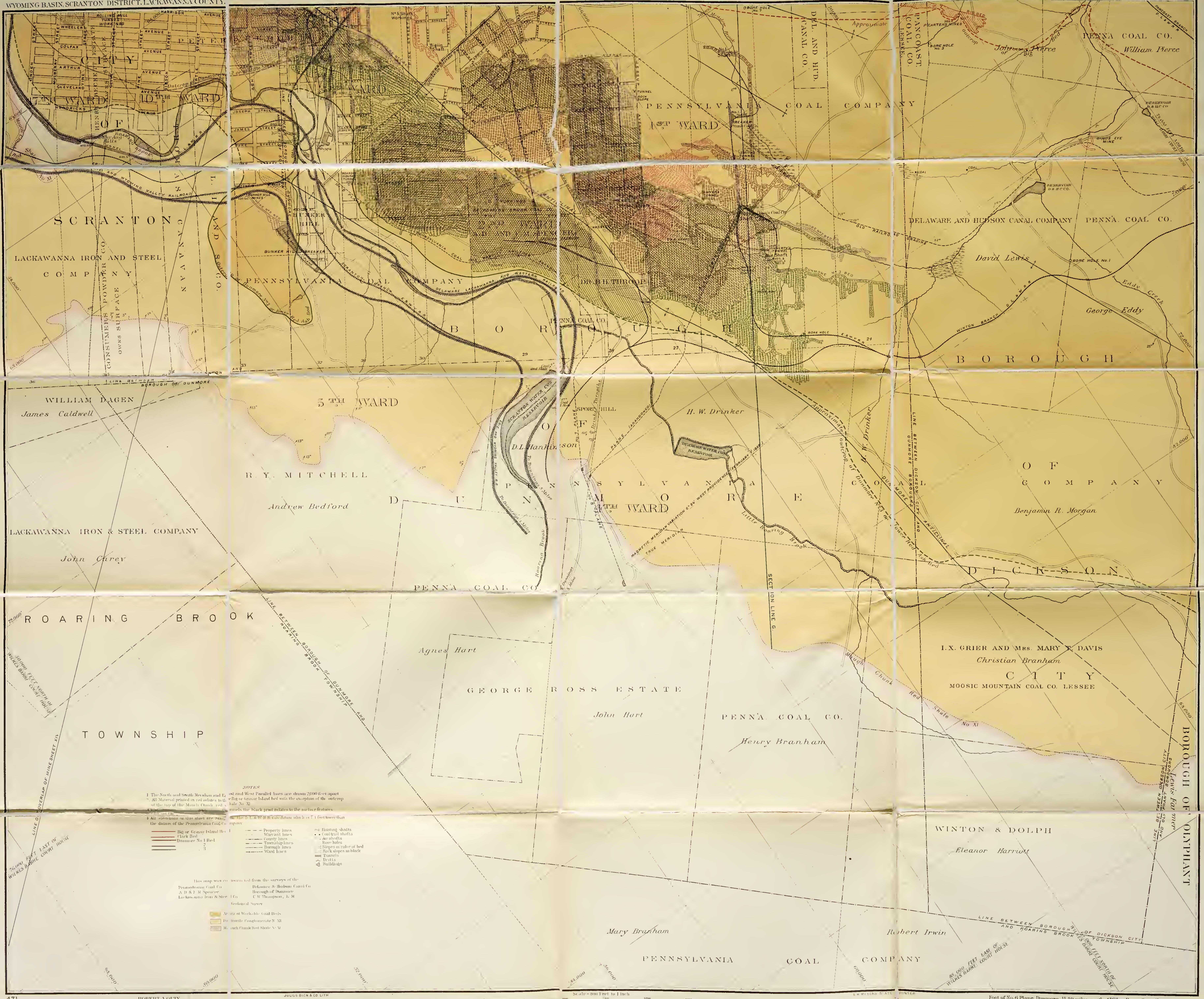
WYOMING BASIN, SCRANTON DISTRICT, LACKAWANNA COUNTY.

NORTHERN COAL FIELD, MINE SHEET No XVI

SECTION OF COAL MEASURES.
DUNMORE SHEET.
DIAMOND DRILL BORE HOLE NO. 2
PENNA. COAL CO.


66' 8"
6' 7" Big Bed
60' 11"
1' 6"
15' 5" Clark Bed
1' 10"
28' 8"
6' 5" Dunmore No 1 Bed
30.9"
4' 0" Dunmore No 2 Bed
58' 1"
3' 8" Dunmore No 3 Bed
48' 3"
10"
103' 5"

Scale 100' = 1"


CITY OF SCRANTON
1ST WARD
10TH WARD
2ND WARD
5TH WARD
PETERSBURG
BUNKER HILL
LACKAWANNA IRON AND STEEL COMPANY
CONSUMERS POWDER CO. OWNS SURFACE
L. I. AND S. CO.
CANAAN
PENNSYLVANIA COAL COMPANY
DELAWARE LACKAWANNA AND WESTERN RAILROAD
DELAWARE AND HUDSON CANAL COMPANY
DEL. AND HUD. CANAL CO.
PANCOAST COAL CO. LESSEE
PENNA. COAL CO.
William Pierce
Johnson Pierce
A. D. AND F. M. SPENCER
DR. B. H. THROOP
BOROUGH OF DUNMORE
1ST WARD
4TH WARD
SPORT HILL
H. W. Drinker
D. L. Hankinson
DUNMORE WATER CO. RESERVOIR
SCRANTON WATER CO. RESERVOIR
Roaring Brook
Little Roaring Brook
David Lewis
George Eddy
Eddy Creek
Benjamin R. Morgan
DICKSON CITY
LINE BETWEEN DICKSON CITY AND DUNMORE BOROUGHS
DUNMORE ANTICLINAL
Approximate Outcrop of Dunmore No. 1 Bed
MAGNETIC MERIDIAN VARIATION 6° 25' WEST PROVIDENCE, FEBRUARY 1, 1888
TRUE MERIDIAN
SECTION LINE G.
WILLIAM DAGEN
James Caldwell
R. Y. MITCHELL
Andrew Bedford
LACKAWANNA IRON & STEEL COMPANY
John Carey
PENNA. COAL CO.
ROARING BROOK TOWNSHIP
LINE BETWEEN BOROUGH OF DUNMORE AND ROARING BROOK TOWNSHIP
Agnes Hart
GEORGE ROSS ESTATE
John Hart
PENN'A COAL CO.
Henry Branham
I. X. GRIER AND MRS. MARY T. DAVIS
Christian Branham
MOOSIC MOUNTAIN COAL CO. LESSEE
Mauch Chunk Red Shale No XI
WINTON & DOLPH
Eleanor Harriott
Mary Branham
Robert Irwin
PENNSYLVANIA COAL COMPANY
LINE BETWEEN BOROUGH OF DICKSON CITY AND ROARING BROOK TOWNSHIP
BOROUGH OF OLYPHANT
LINE OF OVERLAP OF MINE SHEET XV
70,000 FEET EAST OF WILKES BARRE COURT HOUSE
85,000 FEET EAST OF WILKES BARRE COURT HOUSE
50,000 FEET NORTH OF WILKES BARRE COURT HOUSE
48,000
52,000
54,000
56,000
60,000
72,000
80,000
82,000
84,000

NOTES

1 The North and South Meridian and East and West Parallel lines are drawn 2,000 feet apart
2. All Material printed in red relates to the Big or Grassy Island bed with the exception of the outcrop of the top of the Mauch Chunk red shale No XI
3 [illegible] tunnels the black print relates to the surface features with the [illegible]
4 All elevations on this sheet are based on the D. L. & W. R R Co's datum which is 7.1 feet lower than the datum of the Pennsylvania Coal Company

Big or Grassy Island Bed	
Clark Bed	
Dunmore No 1 Bed	
2	
3	

Property lines
Warrant lines
County lines
Township lines
Borough lines
Ward lines

Hoisting shafts
Coal trial shafts
Air shafts
Bore holes
Slopes in color of bed
Rock slopes in black
Tunnels
Drifts
Buildings

This map was constructed from the surveys of the

Pennsylvania Coal Co	Delaware & Hudson Canal Co
A. D. & F. M. Spencer	Borough of Dunmore
Lackawanna Iron & Steel Co	C. W. Thompson, E. M.

Geological Survey

🟨 Area of Workable Coal Beds
▭ Pottsville Conglomerate No XII
▨ Mauch Chunk Red Shale No XI

Foot of No. 6 Plane, Dunmore, 11.40 miles north of Wilkes Barre Court House
" " 12.92 " east " " "

Latitude of Monument, Wilkes Barre Court House yard (observed)		41° 14' 40".48
Longitude " " " "	east of Washington	1° 10' 3".6
Latitude of Scranton Court House (U S Coast and Geodetic Survey)		41° 24' 29"
Longitude " "	East of Washington	1° 23' 13.6"

WILLIAM GRIFFITH, Assistant Geologist

ROBERT A. QUIN
GEORGE W. MILNES } Assistants
WILBUR F. SMITH

JULIUS BIEN & CO. LITH

Scale = 800 Feet to 1 Inch
1/9600 of Nature

JUNE 1888.

ATLAS NORTHERN ANTHRACITE FIELD. PART 3. COLUMNAR SECTION SHEET NO. XL

A A

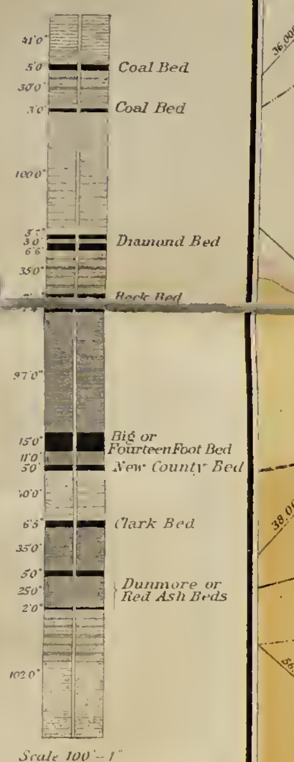
557 Geology
P38m
AA
Atlas
v. 1, pt. 3

GEOLOGICAL SURVEY OF PENNSYLVANIA. J. P. LESLEY, STATE GEOLOGIST
ANTHRACITE DISTRICT FRANK A HILL GEOLOGIST IN CHARGE

WYOMING BASIN, SCRANTON DISTRICT, LACKAWANNA COUNTY

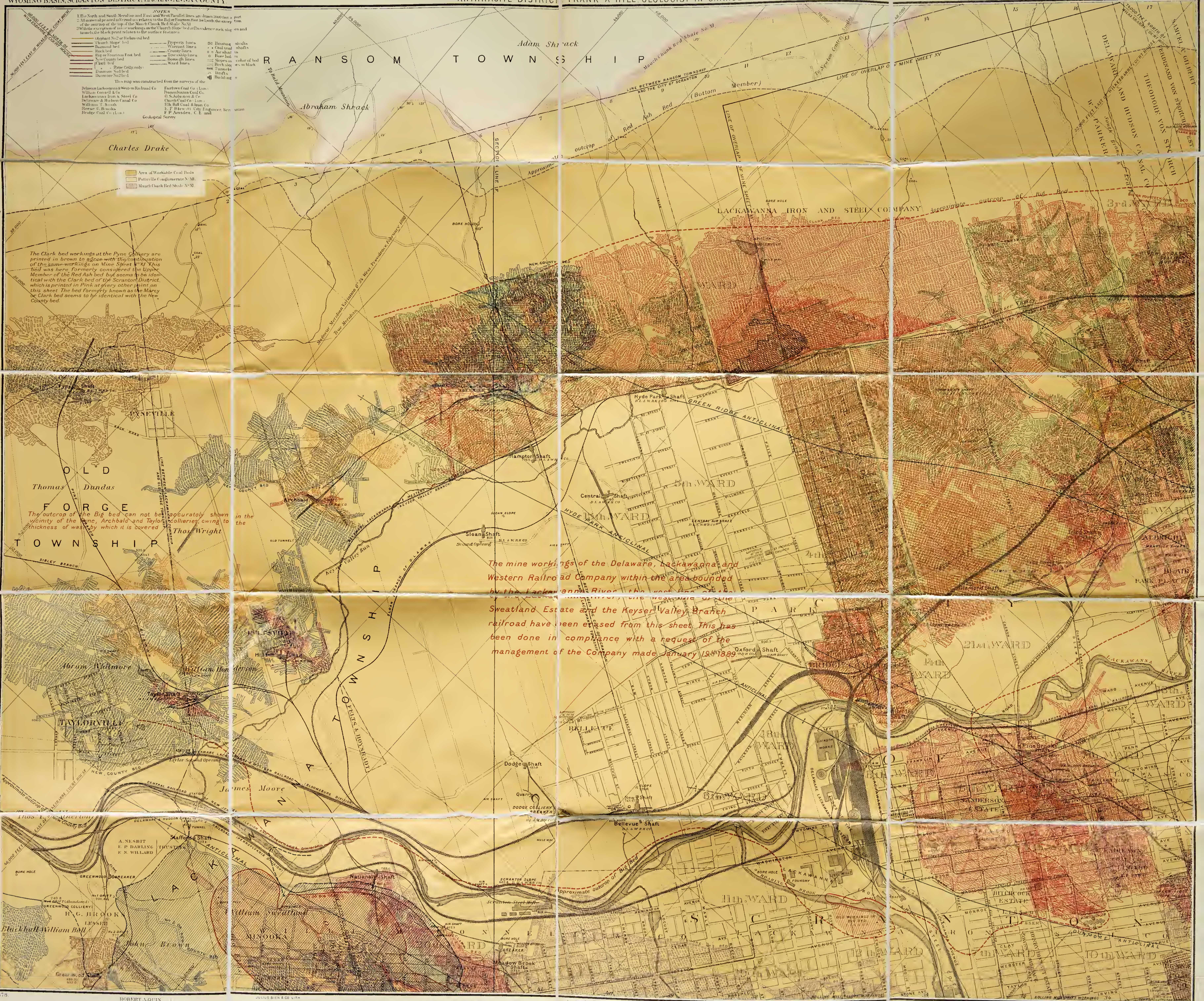
NORTHERN COAL FIELD MINE SHEET. No XIII

SECTION OF COAL MEASURES.
HYDE PARK SHEET.
BORE HOLE
AT BELLEVUE SHAFT
D. L. & W R R. CO.



41'0"
5'0 Coal Bed
30'0"
3'0" Coal Bed
100'0"
3'0" Diamond Bed
6'6"
35'0"
Rock Bed
97'0"
15'0" Big or Fourteen Foot Bed
11'0"
5'0" New County Bed
40'0"
6'5" Clark Bed
35'0"
5'0"
25'0" Dunmore or Red Ash Beds
2'0"
102'0"

Scale 100' – 1"



NOTES
1. The North and South Meridian and East and West Parallel lines are drawn 2000 feet apart
2. All material printed in Vermilion relates to the Big or Fourteen Foot bed, with the exception of the outcrop of the top of the Mauch Chunk Red Shale No XI
3. With the exception of mine workings in the "Church Slope" bed at Providence rock slopes and tunnels, the black print relates to the surface features
Olyphant No 2 or Richmond bed
"Church Slope" bed
Diamond bed
Rock bed
Big or Fourteen Foot bed
New County bed
Clark bed
" " (Pyne Colly. only)
Dunmore No 1 bed
Dunmore No 2 bed
Property lines
Warrant lines
County lines
Township lines
Borough lines
Ward lines
Hoisting shafts
Coal trial shafts
Air shafts
Bore holes
Slopes in color of bed
Rock slopes in black
Tunnels
Drifts
Buildings
This map was constructed from the surveys of the
Delaware Lackawanna & Western Railroad Co
William Connell & Co
Lackawanna Iron & Steel Co
Delaware & Hudson Canal Co
William T. Smith
Reese G. Brooks
Bridge Coal Co (Lim)
Fairlawn Coal Co (Lim)
Pennsylvania Coal Co.
O. S. Johnson & Co
Church Coal Co (Lim)
Elk Hill Coal & Iron Co
E. F. Blewitt City Engineer, Scranton
F. P. Amsden, C. E. and
Geological Survey
Area of Workable Coal Beds
Pottsville Conglomerate No XII
Mauch Chunk Red Shale No XI
The Clark bed workings at the Pyne Colliery are printed in brown to agree with the continuation of the same workings on Mine Sheet No XI. This bed was here formerly considered the Upper Member of the Red Ash bed but seems to be identical with the Clark bed of the Scranton District, which is printed in Pink at every other point on this sheet. The bed formerly known as the Marcy or Clark bed seems to be identical with the New County bed.
The outcrop of the Big bed can not be accurately shown in the vicinity of the Pyne, Archbald and Taylor collieries, owing to the thickness of wash by which it is covered
The mine workings of the Delaware, Lackawanna and Western Railroad Company within the area bounded by the Lackawanna River, the west line of the Sweatland Estate and the Keyser Valley Branch railroad have been erased from this sheet. This has been done in compliance with a request of the management of the Company made January 19th 1889
RANSOM TOWNSHIP
OLD FORGE TOWNSHIP
LACKAWANNA TOWNSHIP
LACKAWANNA IRON AND STEEL COMPANY
Adam Shrack
Abraham Shrack
Charles Drake
Thomas Dundas
Thos. Wright
Abram Whitmore
William Henderson
James Moore
William Sweatland
John Brown
R. G. BROOKS
PYNEVILLE
TAYLORVILLE
MINOOKA
BELLEVUE
HYDE PARK
Pyne Shaft
Archbald Shaft
Taylor Shaft
Hampton Shaft
Central Shaft
Sloan Shaft
Hyde Park Shaft
Oxford Shaft
Dodge Shaft
Bellevue Shaft
Stafford Shaft
National Shaft
Meadow Brook Shafts
Greenwood Shaft
GREEN RIDGE ANTICLINAL
HYDE PARK ANTICLINAL
DUNMORE ANTICLINAL
Approximate outcrop of Big Bed
Approximate outcrop of Red Ash Bed (Bottom Member)
LINE OF OVERLAP OF MINE SHEET XV
Mauch Chunk Red Shale No XI
5th WARD
15th WARD
18th WARD
6th WARD
11th WARD
21st WARD
14th WARD
10th WARD
LACKAWANNA RIVER

WILLIAM GRIFFITH, Assistant Geologist

ROBERT A. QUIN
GEORGE W. MILNES
WILBUR E. SMITH
JINZOO ADACHI
HOWELL T. FISHER
Assistants

JULIUS BIEN & CO. LITH.

Scale 800 Feet to 1 Inch

1/9600 of Nature

JUNE 1888

Scranton Court House 11.31 miles north of Wilkes Barre Court House
" " " 11.16 " east " " " "
Latitude of Monument, Wilkes Barre Court House yard (observed) 41° 14' 40.48"
Longitude " " " " east of Washington 1° 10' 3.6"
Latitude of Scranton Court House (U. S. Coast and Geodetic Survey) 41° 24' 29"
Longitude " " " East of Washington 1° 23' 13.6"